



SEQUENCE LISTING

<110> Lee, Dong-Ki
Lee, Yangsoon
Kim, Jin-Soo

<120> DIFFERENTIATION PROTEINS

<130> 12279-007002

<140> US 10/669,861

<141> 2003-09-24

<150> US 10/314,669

<151> 2002-12-09

<150> US 60/338,441

<151> 2001-12-07

<150> US 60/376,053

<151> 2002-04-26

<150> US 60/400,904

<151> 2002-08-02

<150> US 60/401,089

<151> 2002-08-05

<160> 261

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1137

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(1134)

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Met	Val	Tyr	Pro	Tyr	Asp	Val	Pro	Asp	Tyr	Ala	Glu	Leu	Pro	Pro	Lys	
1				5				10						15		

aag	aag	aga	aag	gta	ggg	atc	cga	att	ccc	ggg	gaa	aaa	ccg	ttt	gag	96
Lys	Lys	Arg	Lys	Val	Gly	Ile	Arg	Ile	Pro	Gly	Glu	Lys	Pro	Phe	Glu	
			20				25						30			

tgt	aaa	gat	tgc	ggg	aaa	gct	ttc	att	cag	aag	tca	aac	ctc	atc	aga	144
Cys	Lys	Asp	Cys	Gly	Lys	Ala	Phe	Ile	Gln	Lys	Ser	Asn	Leu	Ile	Arg	
			35				40					45				

cac	cag	aga	act	cac	acc	ggg	gaa	aaa	ccg	tac	aag	tgt	gaa	gaa	tgt	192
His	Gln	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Glu	Glu	Cys	
50						55					60					
ggc	aaa	gct	ttt	acc	caa	tcc	tca	aac	ctt	act	aaa	cat	aag	aaa	att	240
Gly	Lys	Ala	Phe	Thr	Gln	Ser	Ser	Asn	Leu	Thr	Lys	His	Lys	Lys	Ile	
65					70					75					80	
cat	acc	ggg	gaa	aaa	ccg	tat	aaa	tgt	aag	caa	tgt	ggg	aaa	gct	ttt	288
His	Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Lys	Gln	Cys	Gly	Lys	Ala	Phe	
				85					90					95		
gga	tgt	ccc	tca	aac	ctt	cga	agg	cat	gga	agg	act	cac	acc	ggt	gaa	336
Gly	Cys	Pro	Ser	Asn	Leu	Arg	Arg	His	Gly	Arg	Thr	His	Thr	Gly	Glu	
			100					105					110			
aaa	gcg	gcc	gct	aaa	ttc	tac	ctg	cca	gat	aca	gac	gat	cgt	cac	cgg	384
Lys	Ala	Ala	Ala	Lys	Phe	Tyr	Leu	Pro	Asp	Thr	Asp	Asp	Arg	His	Arg	
		115					120					125				
att	gag	gag	aaa	cgt	aaa	agg	aca	tat	gag	acc	ttc	aag	agc	atc	atg	432
Ile	Glu	Glu	Lys	Arg	Lys	Arg	Thr	Tyr	Glu	Thr	Phe	Lys	Ser	Ile	Met	
	130					135					140					
aag	aag	agt	cct	ttc	agc	gga	ccc	acc	gac	ccc	cgg	cct	cca	cct	cga	480
Lys	Lys	Ser	Pro	Phe	Ser	Gly	Pro	Thr	Asp	Pro	Arg	Pro	Pro	Pro	Arg	
145					150					155					160	
cgc	att	gct	gtg	cct	tcc	cgc	agc	tca	gct	tct	gtc	ccc	aag	cca	gca	528
Arg	Ile	Ala	Val	Pro	Ser	Arg	Ser	Ser	Ala	Ser	Val	Pro	Lys	Pro	Ala	
				165					170					175		
ccc	cag	ccc	tat	ccc	ttt	acg	tca	tcc	ctg	agc	acc	atc	aac	tat	gat	576
Pro	Gln	Pro	Tyr	Pro	Phe	Thr	Ser	Ser	Leu	Ser	Thr	Ile	Asn	Tyr	Asp	
			180					185					190			
gag	ttt	ccc	acc	atg	gtg	ttt	cct	tct	ggg	cag	atc	agc	cag	gcc	tcg	624
Glu	Phe	Pro	Thr	Met	Val	Phe	Pro	Ser	Gly	Gln	Ile	Ser	Gln	Ala	Ser	
		195					200					205				
gcc	ttg	gcc	ccg	gcc	cct	ccc	caa	gtc	ctg	ccc	cag	gct	cca	gcc	cct	672
Ala	Leu	Ala	Pro	Ala	Pro	Pro	Gln	Val	Leu	Pro	Gln	Ala	Pro	Ala	Pro	
	210					215					220					
gcc	cct	gct	cca	gcc	atg	gta	tca	gct	ctg	gcc	cag	gcc	cca	gcc	cct	720
Ala	Pro	Ala	Pro	Ala	Met	Val	Ser	Ala	Leu	Ala	Gln	Ala	Pro	Ala	Pro	
225					230				235					240		
gtc	cca	gtc	cta	gcc	cca	ggc	cct	cct	cag	gct	gtg	gcc	cca	cct	gcc	768
Val	Pro	Val	Leu	Ala	Pro	Gly	Pro	Pro	Gln	Ala	Val	Ala	Pro	Pro	Ala	
			245					250					255			
ccc	aag	ccc	acc	cag	gct	ggg	gaa	gga	acg	ctg	tca	gag	gcc	ctg	ctg	816
Pro	Lys	Pro	Thr	Gln	Ala	Gly	Glu	Gly	Thr	Leu	Ser	Glu	Ala	Leu	Leu	
			260					265				270				
cag	ctg	cag	ttt	gat	gat	gaa	gac	ctg	ggg	gcc	ttg	ctt	ggc	aac	agc	864

Gln	Leu	Gln	Phe	Asp	Asp	Glu	Asp	Leu	Gly	Ala	Leu	Leu	Gly	Asn	Ser		
		275						280					285				
aca	gac	cca	gct	gtg	ttc	aca	gac	ctg	gca	tcc	gtc	gac	aac	tcc	gag		912
Thr	Asp	Pro	Ala	Val	Phe	Thr	Asp	Leu	Ala	Ser	Val	Asp	Asn	Ser	Glu		
		290						295				300					
ttt	cag	cag	ctg	ctg	aac	cag	ggc	ata	cct	gtg	gcc	ccc	cac	aca	act		960
Phe	Gln	Gln	Leu	Leu	Asn	Gln	Gly	Ile	Pro	Val	Ala	Pro	His	Thr	Thr		
305					310						315				320		
gag	ccc	atg	ctg	atg	gag	tac	cct	gag	gct	ata	act	cgc	cta	gtg	aca		1008
Glu	Pro	Met	Leu	Met	Glu	Tyr	Pro	Glu	Ala	Ile	Thr	Arg	Leu	Val	Thr		
				325						330				335			
gcc	cag	agg	ccc	ccc	gac	cca	gct	cct	gct	cca	ctg	ggg	gcc	ccg	ggg		1056
Ala	Gln	Arg	Pro	Pro	Asp	Pro	Ala	Pro	Ala	Pro	Leu	Gly	Ala	Pro	Gly		
			340					345					350				
ctc	ccc	aat	ggc	ctc	ctt	tca	gga	gat	gaa	gac	ttc	tcc	tcc	att	gcg		1104
Leu	Pro	Asn	Gly	Leu	Leu	Ser	Gly	Asp	Glu	Asp	Phe	Ser	Ser	Ile	Ala		
		355					360					365					
gac	atg	gac	ttc	tca	gcc	ctg	ctg	agt	cag	taa							1137
Asp	Met	Asp	Phe	Ser	Ala	Leu	Leu	Ser	Gln								
		370				375											

<210> 2

<211> 378

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 2

Met	Val	Tyr	Pro	Tyr	Asp	Val	Pro	Asp	Tyr	Ala	Glu	Leu	Pro	Pro	Lys		
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			20					25					30				
Cys	Lys	Asp	Cys	Gly	Lys	Ala	Phe	Ile	Gln	Lys	Ser	Asn	Leu	Ile	Arg		
		35					40					45					
His	Gln	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Glu	Glu	Cys		
		50				55					60						
Gly	Lys	Ala	Phe	Thr	Gln	Ser	Ser	Asn	Leu	Thr	Lys	His	Lys	Lys	Ile		
65					70					75					80		
His	Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Lys	Gln	Cys	Gly	Lys	Ala	Phe		
				85				90						95			
Gly	Cys	Pro	Ser	Asn	Leu	Arg	Arg	His	Gly	Arg	Thr	His	Thr	Gly	Glu		
			100					105					110				
Lys	Ala	Ala	Ala	Lys	Phe	Tyr	Leu	Pro	Asp	Thr	Asp	Asp	Arg	His	Arg		
		115					120				125						
Ile	Glu	Glu	Lys	Arg	Lys	Arg	Thr	Tyr	Glu	Thr	Phe	Lys	Ser	Ile	Met		
	130					135					140						
Lys	Lys	Ser	Pro	Phe	Ser	Gly	Pro	Thr	Asp	Pro	Arg	Pro	Pro	Pro	Arg		
145					150					155					160		
Arg	Ile	Ala	Val	Pro	Ser	Arg	Ser	Ser	Ala	Ser	Val	Pro	Lys	Pro	Ala		

				165					170					175			
Pro	Gln	Pro	Tyr	Pro	Phe	Thr	Ser	Ser	Leu	Ser	Thr	Ile	Asn	Tyr	Asp		
			180					185					190				
Glu	Phe	Pro	Thr	Met	Val	Phe	Pro	Ser	Gly	Gln	Ile	Ser	Gln	Ala	Ser		
		195					200					205					
Ala	Leu	Ala	Pro	Ala	Pro	Pro	Gln	Val	Leu	Pro	Gln	Ala	Pro	Ala	Pro		
	210					215					220						
Ala	Pro	Ala	Pro	Ala	Met	Val	Ser	Ala	Leu	Ala	Gln	Ala	Pro	Ala	Pro		
225					230					235					240		
Val	Pro	Val	Leu	Ala	Pro	Gly	Pro	Pro	Gln	Ala	Val	Ala	Pro	Pro	Ala		
			245					250					255				
Pro	Lys	Pro	Thr	Gln	Ala	Gly	Glu	Gly	Thr	Leu	Ser	Glu	Ala	Leu	Leu		
		260						265					270				
Gln	Leu	Gln	Phe	Asp	Asp	Glu	Asp	Leu	Gly	Ala	Leu	Leu	Gly	Asn	Ser		
	275						280					285					
Thr	Asp	Pro	Ala	Val	Phe	Thr	Asp	Leu	Ala	Ser	Val	Asp	Asn	Ser	Glu		
	290					295					300						
Phe	Gln	Gln	Leu	Leu	Asn	Gln	Gly	Ile	Pro	Val	Ala	Pro	His	Thr	Thr		
305					310					315					320		
Glu	Pro	Met	Leu	Met	Glu	Tyr	Pro	Glu	Ala	Ile	Thr	Arg	Leu	Val	Thr		
			325					330					335				
Ala	Gln	Arg	Pro	Pro	Asp	Pro	Ala	Pro	Ala	Pro	Leu	Gly	Ala	Pro	Gly		
		340					345					350					
Leu	Pro	Asn	Gly	Leu	Leu	Ser	Gly	Asp	Glu	Asp	Phe	Ser	Ser	Ile	Ala		
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Asp	Met	Asp	Phe	Ser	Ala	Leu	Leu	Ser	Gln								
	370					375											

<210> 3

<211> 1233

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(1230)

<400> 3

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Met	Val	Tyr	Pro	Tyr	Asp	Val	Pro	Asp	Tyr	Ala	Glu	Leu	Pro	Pro	Lys		
1				5					10					15			

aag	aag	aga	aag	gta	ggg	atc	cga	att	ccc	ggg	gaa	aaa	ccg	tat	gta		96
Lys	Lys	Arg	Lys	Val	Gly	Ile	Arg	Ile	Pro	Gly	Glu	Lys	Pro	Tyr	Val		
			20					25					30				

tgc	gat	gta	gag	gga	tgt	acg	tgg	aaa	ttt	gcc	cgc	tca	gat	aag	ctc		144
Cys	Asp	Val	Glu	Gly	Cys	Thr	Trp	Lys	Phe	Ala	Arg	Ser	Asp	Lys	Leu		
		35					40					45					

aac	aga	cac	aag	aaa	agg	cac	acc	ggg	gaa	aaa	ccg	tat	gag	tgt	cac		192
Asn	Arg	His	Lys	Lys	Arg	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	His		
	50					55					60						

gat	tgc	gga	aag	tcc	ttt	agg	cag	agc	acc	cac	ctc	act	cgg	cac	cgg		240
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Asp 65	Cys	Gly	Lys	Ser	Phe 70	Arg	Gln	Ser	Thr	His 75	Leu	Thr	Arg	His	Arg 80	
agg	atc	cac	acc	ggg	gaa	aaa	cgc	tat	gag	tgt	aat	tac	tgt	gga	aaa	288
Arg	Ile	His	Thr	Gly 85	Glu	Lys	Pro	Tyr	Glu 90	Cys	Asn	Tyr	Cys	Gly	Lys 95	
acc	ttt	agt	gtg	agc	tca	acc	ctt	att	aga	cat	cag	aga	atc	cac	acc	336
Thr	Phe	Ser	Val 100	Ser	Ser	Thr	Leu	Ile 105	Arg	His	Gln	Arg	Ile 110	His	Thr	
ggg	gaa	aaa	cgc	tat	gta	tgc	gat	gta	gag	gga	tgt	acg	tgg	aaa	ttt	384
Gly	Glu	Lys 115	Pro	Tyr	Val	Cys	Asp 120	Val	Glu	Gly	Cys	Thr 125	Trp	Lys	Phe	
gcc	cgc	tca	gat	aag	ctc	aac	aga	cac	aag	aaa	agg	cac	acc	ggt	gaa	432
Ala	Arg	Ser	Asp 130	Lys	Leu	Asn 135	Arg	His	Lys	Lys	Arg 140	His	Thr	Gly	Glu	
aaa	gcg	gcc	gct	aaa	ttc	tac	ctg	cca	gat	aca	gac	gat	cgt	cac	cgg	480
Lys	Ala	Ala	Ala 145	Lys	Phe 150	Tyr	Leu	Pro	Asp	Thr 155	Asp	Asp	Arg	His	Arg 160	
att	gag	gag	aaa	cgt	aaa	agg	aca	tat	gag	acc	ttc	aag	agc	atc	atg	528
Ile	Glu	Glu	Lys 165	Arg	Lys	Arg	Thr	Tyr	Glu 170	Thr	Phe	Lys	Ser	Ile 175	Met	
aag	aag	agt	cct	ttc	agc	gga	ccc	acc	gac	ccc	cgg	cct	cca	cct	cga	576
Lys	Lys	Ser 180	Pro	Phe	Ser	Gly	Pro	Thr 185	Asp	Pro	Arg	Pro 190	Pro	Pro	Arg	
cgc	att	gct	gtg	cct	tcc	cgc	agc	tca	gct	tct	gtc	ccc	aag	cca	gca	624
Arg	Ile	Ala 195	Val	Pro	Ser	Arg	Ser	Ser 200	Ala	Ser	Val 205	Pro	Lys	Pro	Ala	
ccc	cag	ccc	tat	ccc	ttt	acg	tca	tcc	ctg	agc	acc	atc	aac	tat	gat	672
Pro	Gln	Pro	Tyr 210	Pro	Phe	Thr 215	Ser	Ser	Leu	Ser 220	Thr	Ile	Asn	Tyr	Asp	
gag	ttt	ccc	acc	atg	gtg	ttt	cct	tct	ggg	cag	atc	agc	cag	gcc	tcg	720
Glu	Phe	Pro	Thr 225	Met	Val 230	Phe	Pro	Ser	Gly	Gln 235	Ile	Ser	Gln	Ala 240	Ser	
gcc	ttg	gcc	cgc	gcc	cct	ccc	caa	gtc	ctg	ccc	cag	gct	cca	gcc	cct	768
Ala	Leu	Ala	Pro 245	Ala	Pro	Pro	Gln	Val 250	Leu	Pro	Gln	Ala 255	Pro	Ala	Pro	
gcc	cct	gct	cca	gcc	atg	gta	tca	gct	ctg	gcc	cag	gcc	cca	gcc	cct	816
Ala	Pro	Ala	Pro 260	Ala	Met	Val	Ser	Ala 265	Leu	Ala	Gln	Ala 270	Pro	Ala	Pro	
gtc	cca	gtc	cta	gcc	cca	ggc	cct	cct	cag	gct	gtg	gcc	cca	cct	gcc	864
Val	Pro	Val 275	Leu	Ala	Pro	Gly	Pro 280	Pro	Gln	Ala	Val 285	Ala	Pro	Pro	Ala	
ccc	aag	ccc	acc	cag	gct	ggg	gaa	gga	acg	ctg	tca	gag	gcc	ctg	ctg	912
Pro	Lys	Pro	Thr	Gln	Ala	Gly	Glu	Gly	Thr	Leu	Ser	Glu	Ala	Leu	Leu	

290	295	300	
cag ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc			960
Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser			
305	310	315	320
aca gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag			1008
Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu			
	325	330	335
ttt cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act			1056
Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr			
	340	345	350
gag ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca			1104
Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr			
	355	360	365
gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg			1152
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly			
	370	375	380
ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg			1200
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala			
385	390	395	400
gac atg gac ttc tca gcc ctg ctg agt cag taa			1233
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln			
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<213> Artificial Sequence			
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<223> plasmid sequence			
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Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp Lys Leu			
	35	40	45
Asn Arg His Lys Lys Arg His Thr Gly Glu Lys Pro Tyr Glu Cys His			
	50	55	60
Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu Thr Arg His Arg			
	65	70	75
Arg Ile His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Tyr Cys Gly Lys			
	85	90	95
Thr Phe Ser Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile His Thr			
	100	105	110
Gly Glu Lys Pro Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe			
	115	120	125
Ala Arg Ser Asp Lys Leu Asn Arg His Lys Lys Arg His Thr Gly Glu			
	130	135	140

Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg
 145 150 155 160
 Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met
 165 170 175
 Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Arg
 180 185 190
 Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala
 195 200 205
 Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp
 210 215 220
 Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser
 225 230 235 240
 Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro
 245 250 255
 Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro
 260 265 270
 Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala
 275 280 285
 Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu
 290 295 300
 Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser
 305 310 315 320
 Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu
 325 330 335
 Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr
 340 345 350
 Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr
 355 360 365
 Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
 370 375 380
 Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
 385 390 395 400
 Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
 405 410

<210> 5

<211> 1137

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(1134)

<400> 5

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 Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15

aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tat aag 96
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Lys
 20 25 30

tgc atg gag tgt ggg aag gct ttt aac cgc agg tca cac ctc aca cgg 144
 Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg

35	40	45	
cac cag cgg att cac acc ggg gaa aaa ccg ttc cag tgt aaa act tgt His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys 50 55 60			192
cag cga aag ttc tcc cgg tcc gac cac ctg aag acc cac acc agg act Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr 65 70 75 80			240
cat acc ggg gaa aaa ccg tat aca tgt aaa cag tgt ggg aaa gcc ttc His Thr Gly Glu Lys Pro Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe 85 90 95			288
agt gtt tcc agt tcc ctt cga aga cat gaa acc act cac acc ggt gaa Ser Val Ser Ser Ser Leu Arg Arg His Glu Thr Thr His Thr Gly Glu 100 105 110			336
aaa gcg gcc gct aaa ttc tac ctg cca gat aca gac gat cgt cac cgg Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg 115 120 125			384
att gag gag aaa cgt aaa agg aca tat gag acc ttc aag agc atc atg Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met 130 135 140			432
aag aag agt cct ttc agc gga ccc acc gac ccc cgg cct cca cct cga Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg 145 150 155 160			480
cgc att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala 165 170 175			528
ccc cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp 180 185 190			576
gag ttt ccc acc atg gtg ttt cct tct ggg cag atc agc cag gcc tcg Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser 195 200 205			624
gcc ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag gct cca gcc cct Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro 210 215 220			672
gcc cct gct cca gcc atg gta tca gct ctg gcc cag gcc cca gcc cct Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro 225 230 235 240			720
gtc cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala 245 250 255			768
ccc aag ccc acc cag gct ggg gaa gga acg ctg tca gag gcc ctg ctg Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu 260 265 270			816

cag ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc 864
 Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser
 275 280 285
 aca gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag 912
 Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu
 290 295 300
 ttt cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act 960
 Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr
 305 310 315 320
 gag ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca 1008
 Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr
 325 330 335
 gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg 1056
 Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
 340 345 350
 ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg 1104
 Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
 355 360 365
 gac atg gac ttc tca gcc ctg ctg agt cag taa 1137
 Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
 370 375

<210> 6

<211> 378

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 6

Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Lys
 20 25 30
 Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg
 35 40 45
 His Gln Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys
 50 55 60
 Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr
 65 70 75 80
 His Thr Gly Glu Lys Pro Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe
 85 90 95
 Ser Val Ser Ser Ser Leu Arg Arg His Glu Thr Thr His Thr Gly Glu
 100 105 110
 Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg
 115 120 125
 Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met
 130 135 140
 Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg

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145          150          155          160
Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala
          165          170          175
Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp
          180          185          190
Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser
          195          200          205
Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro
          210          215          220
Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro
225          230          235          240
Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala
          245          250          255
Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu
          260          265          270
Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser
          275          280          285
Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu
          290          295          300
Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr
305          310          315          320
Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr
          325          330          335
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
          340          345          350
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
          355          360          365
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
          370          375

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<210> 7
<211> 1149
<212> DNA
<213> Artificial Sequence

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<220>
<223> plasmid sequence

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<221> CDS
<222> (1)...(1146)

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<400> 7
atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa      48
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
  1          5          10          15

aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg ttt gag      96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Glu
          20          25          30

tgt aaa gat tgc ggg aaa gct ttc att cag aag tca aac ctc atc aga      144
Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu Ile Arg
          35          40          45

cac cag aga act cac acc ggg gaa aaa ccg tat gct tgc cct gtc gag      192
His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu
          50          55          60

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tcc tgc gat cgc cgc ttt tct gat tcg tcg aac ctt acc cgc cat atc Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg His Ile 65 70 75 80	240
cgc atc cac acc ggg gaa aaa ccg tat gct tgc cct gtc gag tcc tgc Arg Ile His Thr Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu Ser Cys 85 90 95	288
gat cgc cgc ttt tct gat tcg tcg aac ctt acc cgc cat atc cgc atc Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg His Ile Arg Ile 100 105 110	336
cac acc ggt gaa aaa gcg gcc gct aaa ttc tac ctg cca gat aca gac His Thr Gly Glu Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp 115 120 125	384
gat cgt cac cgg att gag gag aaa cgt aaa agg aca tat gag acc ttc Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe 130 135 140	432
aag agc atc atg aag aag agt cct ttc agc gga ccc acc gac ccc cgg Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg 145 150 155 160	480
cct cca cct cga cgc att gct gtg cct tcc cgc agc tca gct tct gtc Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val 165 170 175	528
ccc aag cca gca ccc cag ccc tat ccc ttt acg tca tcc ctg agc acc Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr 180 185 190	576
atc aac tat gat gag ttt ccc acc atg gtg ttt cct tct ggg cag atc Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile 195 200 205	624
agc cag gcc tcg gcc ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln 210 215 220	672
gct cca gcc cct gcc cct gct cca gcc atg gta tca gct ctg gcc cag Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln 225 230 235 240	720
gcc cca gcc cct gtc cca gtc cta gcc cca ggc cct cct cag gct gtg Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val 245 250 255	768
gcc cca cct gcc ccc aag ccc acc cag gct ggg gaa gga acg ctg tca Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser 260 265 270	816
gag gcc ctg ctg cag ctg cag ttt gat gat gaa gac ctg ggg gcc ttg Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu 275 280 285	864

ctt ggc aac agc aca gac cca gct gtg ttc aca gac ctg gca tcc gtc 912
 Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val
 290 295 300

gac aac tcc gag ttt cag cag ctg ctg aac cag ggc ata cct gtg gcc 960
 Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala
 305 310 315 320

ccc cac aca act gag ccc atg ctg atg gag tac cct gag gct ata act 1008
 Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr
 325 330 335

cgc cta gtg aca gcc cag agg ccc ccc gac cca gct cct gct cca ctg 1056
 Arg Leu Val Thr Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu
 340 345 350

ggg gcc ccg ggg ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc 1104
 Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe
 355 360 365

tcc tcc att gcg gac atg gac ttc tca gcc ctg ctg agt cag 1146
 Ser Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
 370 375 380

taa 1149

<210> 8

<211> 382

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 8

Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Glu
 20 25 30
 Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu Ile Arg
 35 40 45
 His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu
 50 55 60
 Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg His Ile
 65 70 75 80
 Arg Ile His Thr Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu Ser Cys
 85 90 95
 Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg His Ile Arg Ile
 100 105 110
 His Thr Gly Glu Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp
 115 120 125
 Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe
 130 135 140
 Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg
 145 150 155 160
 Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val
 165 170 175

Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr
 180 185 190
 Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile
 195 200 205
 Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln
 210 215 220
 Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln
 225 230 235 240
 Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val
 245 250 255
 Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser
 260 265 270
 Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu
 275 280 285
 Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val
 290 295 300
 Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala
 305 310 315 320
 Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr
 325 330 335
 Arg Leu Val Thr Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu
 340 345 350
 Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe
 355 360 365
 Ser Ser Ile Ala Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
 370 375 380

<210> 9

<211> 630

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(627)

<400> 9

atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa 48
 Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15

aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tat gag 96
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu
 20 25 30

tgt gat cac tgt gga aaa tcc ttt agc cag agc tct cat ctg aat gtg 144
 Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val
 35 40 45

cac aaa aga act cac acc ggg gaa aaa ccg tac aga tgt gag gaa tgt 192
 His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Glu Glu Cys
 50 55 60

ggc aaa gcc ttt agg tgg ccc tca aac ctt act aga cat aag aga att 240
 Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu Thr Arg His Lys Arg Ile

65	70	75	80	
cac acc ggg gaa aaa ccg tac aga tgt gag gaa tgt ggc aaa gcc ttt				288
His Thr Gly Glu Lys Pro Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe				
	85	90	95	
agg tgg ccc tca aac ctt act aga cat aag aga att cac acc ggg gaa				336
Arg Trp Pro Ser Asn Leu Thr Arg His Lys Arg Ile His Thr Gly Glu				
	100	105	110	
aaa ccg ttt gcc tgc cct gag tgt cct aag cgc ttc atg aga tcc gac				384
Lys Pro Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg Ser Asp				
	115	120	125	
aac ctg acc cag cat atc aag acc cac acc ggt gaa aaa gcg gcc gct				432
Asn Leu Thr Gln His Ile Lys Thr His Thr Gly Glu Lys Ala Ala Ala				
	130	135	140	
aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg ctc ttt act cgg				480
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg				
	145	150	155	160
gac gag tgg aag aag ctg gat ctg tct cag aga agc ctg tac cgt gag				528
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu				
	165	170	175	
gtg atg ctg gag aat tac agc aac ctg gcc tcc atg gca gga ttc ctg				576
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu				
	180	185	190	
ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa gga gag gat ccc				624
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro				
	195	200	205	
tggttaa				630
Trp				
<210> 10				
<211> 209				
<212> PRT				
<213> Artificial Sequence				
<220>				
<223> plasmid sequence				
<400> 10				
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys				
1	5	10	15	
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu				
	20	25	30	
Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val				
	35	40	45	
His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Glu Glu Cys				
	50	55	60	
Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu Thr Arg His Lys Arg Ile				
65	70	75	80	

His Thr Gly Glu Lys Pro Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe
 85 90 95
 Arg Trp Pro Ser Asn Leu Thr Arg His Lys Arg Ile His Thr Gly Glu
 100 105 110
 Lys Pro Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg Ser Asp
 115 120 125
 Asn Leu Thr Gln His Ile Lys Thr His Thr Gly Glu Lys Ala Ala Ala
 130 135 140
 Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg
 145 150 155 160
 Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu
 165 170 175
 Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu
 180 185 190
 Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro
 195 200 205
 Trp

<210> 11
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<221> CDS
 <222> (1)...(639)

<400> 11

atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa	48
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys	
1 5 10 15	
aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tac tcc	96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Ser	
20 25 30	
tgt ggc att tgt ggc aaa tcc ttc tct gac tcc agt gcc aaa agg aga	144
Cys Gly Ile Cys Gly Lys Ser Phe Ser Asp Ser Ser Ala Lys Arg Arg	
35 40 45	
cac tgc att cta cac acc ggg gaa aaa ccg tat gta tgc gat gta gag	192
His Cys Ile Leu His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val Glu	
50 55 60	
gga tgt acg tgg aaa ttt gcc cgc tca gat aag ctc aac aga cac aag	240
Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp Lys Leu Asn Arg His Lys	
65 70 75 80	
aaa agg cac acc ggg gaa aaa ccg tat gta tgc gat gta gag gga tgt	288
Lys Arg His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val Glu Gly Cys	
85 90 95	
acg tgg aaa ttt gcc cgc tca gat gag ctc aac aga cac aag aaa agg	336
Thr Trp Lys Phe Ala Arg Ser Asp Glu Leu Asn Arg His Lys Lys Arg	

100	105	110	
cac acc ggg gaa aaa ccg tat gag tgt cac gat tgc gga aag tcc ttt			384
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe			
115	120	125	
agg cag agc acc cac ctc act cgg cac cgg agg atc cac acc ggt gaa			432
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu			
130	135	140	
aaa gcg gcc gct aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg			480
Lys Ala Ala Ala Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val			
145	150	155	160
ctc ttt act cgg gac gag tgg aag aag ctg gat ctg tct cag aga agc			528
Leu Phe Thr Arg Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser			
165	170	175	
ctg tac cgt gag gtg atg ctg gag aat tac agc aac ctg gcc tcc atg			576
Leu Tyr Arg Glu Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met			
180	185	190	
gca gga ttc ctg ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa			624
Ala Gly Phe Leu Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln			
195	200	205	
gga gag gat ccc tgg taa			642
Gly Glu Asp Pro Trp			
210			
<210> 12			
<211> 213			
<212> PRT			
<213> Artificial Sequence			
<220>			
<223> plasmid sequence			
<400> 12			
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys			
1 5 10 15			
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Ser			
20 25 30			
Cys Gly Ile Cys Gly Lys Ser Phe Ser Asp Ser Ser Ala Lys Arg Arg			
35 40 45			
His Cys Ile Leu His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val Glu			
50 55 60			
Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp Lys Leu Asn Arg His Lys			
65 70 75 80			
Lys Arg His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val Glu Gly Cys			
85 90 95			
Thr Trp Lys Phe Ala Arg Ser Asp Glu Leu Asn Arg His Lys Lys Arg			
100 105 110			
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe			
115 120 125			
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu			
130 135 140			

Lys Ala Ala Ala Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val
 145 150 155 160
 Leu Phe Thr Arg Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser
 165 170 175
 Leu Tyr Arg Glu Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met
 180 185 190
 Ala Gly Phe Leu Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln
 195 200 205
 Gly Glu Asp Pro Trp
 210

<210> 13
 <211> 630
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<221> CDS
 <222> (1)...(627)

<400> 13
 atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa 48
 Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15

 aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tat gag 96
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu
 20 25 30

 tgt gat cac tgt gga aaa tcc ttt agc cag agc tct cat ctg aat gtg 144
 Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val
 35 40 45

 cac aaa aga act cac acc ggg gaa aaa ccg tac atg tgc agt gag tgt 192
 His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Met Cys Ser Glu Cys
 50 55 60

 ggg cga ggc ttc agc cag aag tca aac ctc atc ata cac cag agg aca 240
 Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu Ile Ile His Gln Arg Thr
 65 70 75 80

 cac acc ggg gaa aaa ccg tat gag tgt cac gat tgc gga aag tcc ttt 288
 His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe
 85 90 95

 agg cag agc acc cac ctc act cgg cac cgg agg atc cac acc ggg gaa 336
 Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu
 100 105 110

 aaa ccg tat aaa tgt aag caa tgt ggg aaa gct ttt gga tgt ccc tca 384
 Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser
 115 120 125

 aac ctt cga agg cat gga agg act cac acc ggt gaa aaa gcg gcc gct 432
 Asn Leu Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Ala Ala Ala

130	135	140	
aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg ctc ttt act cgg			480
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg			
145	150	155	160
gac gag tgg aag aag ctg gat ctg tct cag aga agc ctg tac cgt gag			528
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu			
	165	170	175
gtg atg ctg gag aat tac agc aac ctg gcc tcc atg gca gga ttc ctg			576
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu			
	180	185	190
ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa gga gag gat ccc			624
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro			
	195	200	205
tggttaa			630
Trp			
<210> 14			
<211> 209			
<212> PRT			
<213> Artificial Sequence			
<220>			
<223> plasmid sequence			
<400> 14			
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys			
1	5	10	15
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu			
	20	25	30
Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val			
	35	40	45
His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Met Cys Ser Glu Cys			
	50	55	60
Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu Ile His Gln Arg Thr			
65	70	75	80
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe			
	85	90	95
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu			
	100	105	110
Lys Pro Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser			
	115	120	125
Asn Leu Arg Arg His Gly Arg Thr His Thr Gly Glu Lys Ala Ala Ala			
	130	135	140
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg			
145	150	155	160
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu			
	165	170	175
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu			
	180	185	190
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro			
	195	200	205

Trp

<210> 15

<211> 630

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(627)

<400> 15

atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa	48
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys	
1 5 10 15	
aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tat gag	96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu	
20 25 30	
tgt gat cac tgt gga aaa tcc ttt agc cag agc tct cat ctg aat gtg	144
Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val	
35 40 45	
cac aaa aga act cac acc ggg gaa aaa ccg tat gag tgt aat tac tgt	192
His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Tyr Cys	
50 55 60	
gga aaa acc ttt agt gtg agc tca acc ctt att aga cat cag aga atc	240
Gly Lys Thr Phe Ser Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile	
65 70 75 80	
cac acc ggg gaa aaa ccg ttt gcc tgc cct gag tgt cct aag cgc ttc	288
His Thr Gly Glu Lys Pro Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe	
85 90 95	
atg aga tcc gac aac ctg acc cag cat atc aag acc cac acc ggg gaa	336
Met Arg Ser Asp Asn Leu Thr Gln His Ile Lys Thr His Thr Gly Glu	
100 105 110	
aaa ccg tat gag tgt cac gat tgc gga aag tcc ttt agg cag agc acc	384
Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr	
115 120 125	
cac ctc act cgg cac cgg agg atc cac acc ggt gaa aaa gcg gcc gct	432
His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu Lys Ala Ala Ala	
130 135 140	
aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg ctc ttt act cgg	480
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg	
145 150 155 160	
gac gag tgg aag aag ctg gat ctg tct cag aga agc ctg tac cgt gag	528
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu	

	165	170	175	
gtg atg ctg gag aat tac agc aac ctg gcc tcc atg gca gga ttc ctg				576
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu				
	180	185	190	
ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa gga gag gat ccc				624
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro				
	195	200	205	
tggttaa				630
Trp				

<210> 16
 <211> 209
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 16

Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys				
1 5 10 15				
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu				
20 25 30				
Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val				
35 40 45				
His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys Asn Tyr Cys				
50 55 60				
Gly Lys Thr Phe Ser Val Ser Ser Thr Leu Ile Arg His Gln Arg Ile				
65 70 75 80				
His Thr Gly Glu Lys Pro Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe				
85 90 95				
Met Arg Ser Asp Asn Leu Thr Gln His Ile Lys Thr His Thr Gly Glu				
100 105 110				
Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr				
115 120 125				
His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu Lys Ala Ala Ala				
130 135 140				
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg				
145 150 155 160				
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu				
165 170 175				
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu				
180 185 190				
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro				
195 200 205				
Trp				

<210> 17
 <211> 1137
 <212> DNA
 <213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(1134)

<400> 17

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Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys	
1 5 10 15	
aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg ttc cag	96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln	
20 25 30	
tgt aaa act tgt cag cga aag ttc tcc cgg tcc gac cac ctg aag acc	144
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr	
35 40 45	
cac acc agg act cat acc ggg gaa aaa ccg tat aag tgc atg gag tgt	192
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Met Glu Cys	
50 55 60	
ggg aag gct ttt aac cgc agg tca cac ctc aca cgg cac cag cgg att	240
Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln Arg Ile	
65 70 75 80	
cac acc ggg gaa aaa ccg tat aaa tgc ggc cag tgt ggg aag ttc tac	288
His Thr Gly Glu Lys Pro Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr	
85 90 95	
tcg cag gtc tcc cac ctc acc cgc cac cag aaa atc cac acc ggt gaa	336
Ser Gln Val Ser His Leu Thr Arg His Gln Lys Ile His Thr Gly Glu	
100 105 110	
aaa gcg gcc gct aaa ttc tac ctg cca gat aca gac gat cgt cac cgg	384
Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg	
115 120 125	
att gag gag aaa cgt aaa agg aca tat gag acc ttc aag agc atc atg	432
Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met	
130 135 140	
aag aag agt cct ttc agc gga ccc acc gac ccc cgg cct cca cct cga	480
Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg	
145 150 155 160	
cgc att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca	528
Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala	
165 170 175	
ccc cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat	576
Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp	
180 185 190	
gag ttt ccc acc atg gtg ttt cct tct ggg cag atc agc cag gcc tcg	624
Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser	

195	200	205	
gcc ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag gct cca gcc cct Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro 210 215 220			672
gcc cct gct cca gcc atg gta tca gct ctg gcc cag gcc cca gcc cct Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro 225 230 235 240			720
gtc cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala 245 250 255			768
ccc aag ccc acc cag gct ggg gaa gga acg ctg tca gag gcc ctg ctg Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu 260 265 270			816
cag ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser 275 280 285			864
aca gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu 290 295 300			912
ttt cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr 305 310 315 320			960
gag ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr 325 330 335			1008
gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly 340 345 350			1056
ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala 355 360 365			1104
gac atg gac ttc tca gcc ctg ctg agt cag taa Asp Met Asp Phe Ser Ala Leu Leu Ser Gln 370 375			1137
<210> 18			
<211> 378			
<212> PRT			
<213> Artificial Sequence			
<220>			
<223> plasmid sequence			
<400> 18			
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys 1 5 10 15			

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Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln
      20      25      30
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
      35      40      45
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Met Glu Cys
      50      55      60
Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln Arg Ile
      65      70      75      80
His Thr Gly Glu Lys Pro Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr
      85      90      95
Ser Gln Val Ser His Leu Thr Arg His Gln Lys Ile His Thr Gly Glu
      100      105      110
Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg
      115      120      125
Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met
      130      135      140
Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg
      145      150      155      160
Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala
      165      170      175
Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp
      180      185      190
Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser
      195      200      205
Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro
      210      215      220
Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro
      225      230      235      240
Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala
      245      250      255
Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu
      260      265      270
Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser
      275      280      285
Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu
      290      295      300
Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr
      305      310      315      320
Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr
      325      330      335
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
      340      345      350
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
      355      360      365
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
      370      375

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<210> 19

<211> 1137

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(1134)

<400> 19

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Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys	
1 5 10 15	
aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tac aaa	96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Lys	
20 25 30	
tgt gaa gaa tgt ggc aaa gcc ttt agg cag tcc tca cac ctt act aca	144
Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu Thr Thr	
35 40 45	
cat aag ata att cat acc ggg gaa aaa ccg tat aag tgc atg gag tgt	192
His Lys Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met Glu Cys	
50 55 60	
ggg aag gct ttt aac cgc agg tca cac ctc aca cgg cac cag cgg att	240
Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln Arg Ile	
65 70 75 80	
cac acc ggg gaa aaa ccg ttc cag tgt aaa act tgt cag cga aag ttc	288
His Thr Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe	
85 90 95	
tcc cgg tcc gac cac ctg aag acc cac acc agg act cat acc ggt gaa	336
Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu	
100 105 110	
aaa gcg gcc gct aaa ttc tac ctg cca gat aca gac gat cgt cac cgg	384
Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg	
115 120 125	
att gag gag aaa cgt aaa agg aca tat gag acc ttc aag agc atc atg	432
Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met	
130 135 140	
aag aag agt cct ttc agc gga ccc acc gac ccc cgg cct cca cct cga	480
Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg	
145 150 155 160	
cgc att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca	528
Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala	
165 170 175	
ccc cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat	576
Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp	
180 185 190	
gag ttt ccc acc atg gtg ttt cct tct ggg cag atc agc cag gcc tcg	624
Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser	
195 200 205	
gcc ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag gct cca gcc cct	672
Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro	
210 215 220	

gcc cct gct cca gcc atg gta tca gct ctg gcc cag gcc cca gcc cct 720
 Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro
 225 230 235 240

gtc cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc 768
 Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala
 245 250 255

ccc aag ccc acc cag gct ggg gaa gga acg ctg tca gag gcc ctg ctg 816
 Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu
 260 265 270

cag ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc 864
 Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser
 275 280 285

aca gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag 912
 Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu
 290 295 300

ttt cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act 960
 Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr
 305 310 315 320

gag ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca 1008
 Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr
 325 330 335

gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg 1056
 Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
 340 345 350

ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg 1104
 Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
 355 360 365

gac atg gac ttc tca gcc ctg ctg agt cag taa 1137
 Asp Met Asp Phe Ser Ala Leu Leu Ser Gln
 370 375

<210> 20

<211> 378

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 20

Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
 1 5 10 15
 Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Lys
 20 25 30
 Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu Thr Thr
 35 40 45
 His Lys Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys Met Glu Cys

50		55		60
Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His Gln Arg Ile				
65		70		75
His Thr Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe				80
	85		90	95
Ser Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu				
	100		105	110
Lys Ala Ala Ala Lys Phe Tyr Leu Pro Asp Thr Asp Asp Arg His Arg				
	115		120	125
Ile Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met				
	130		135	140
Lys Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg				
145		150		155
Arg Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala				160
	165		170	175
Pro Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp				
	180		185	190
Glu Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser				
	195		200	205
Ala Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro				
210		215		220
Ala Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro				
225		230		235
Val Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala				240
	245		250	255
Pro Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu				
	260		265	270
Gln Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser				
	275		280	285
Thr Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu				
	290		295	300
Phe Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr				
305		310		315
Glu Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr				
	325		330	335
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly				
	340		345	350
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala				
	355		360	365
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln				
370		375		

<210> 21

<211> 83

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 21

Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu	
1	5
Ile Arg His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Ala Cys Pro	10
	15
	20
Val Glu Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg	25
	30
	35
	40
	45

His Ile Arg Ile His Thr Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu
 50 55 60
 Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser Asn Leu Thr Arg His Ile
 65 70 75 80
 Arg Ile His

<210> 22
 <211> 110
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 22
 Ser Cys Gly Ile Cys Gly Lys Ser Phe Ser Asp Ser Ser Ala Lys Arg
 1 5 10 15
 Arg His Cys Ile Leu His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val
 20 25 30
 Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp Lys Leu Asn Arg His
 35 40 45
 Lys Lys Arg His Thr Gly Glu Lys Pro Tyr Val Cys Asp Val Glu Gly
 50 55 60
 Cys Thr Trp Lys Phe Ala Arg Ser Asp Glu Leu Asn Arg His Lys Lys
 65 70 75 80
 Arg His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser
 85 90 95
 Phe Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His
 100 105 110

<210> 23
 <211> 107
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 23
 Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
 1 5 10 15
 Asn Val His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Arg Cys Glu
 20 25 30
 Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu Thr Arg His Lys
 35 40 45
 Arg Ile His Thr Gly Glu Lys Pro Tyr Arg Cys Glu Glu Cys Gly Lys
 50 55 60
 Ala Phe Arg Trp Pro Ser Asn Leu Thr Arg His Lys Arg Ile His Thr
 65 70 75 80
 Gly Glu Lys Pro Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg
 85 90 95
 Ser Asp Asn Leu Thr Gln His Ile Lys Thr His
 100 105

<210> 24
 <211> 26

<212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 24
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 25
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 25
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 26
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 26
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 27
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(26)

<223> Xaa = any amino acid

<400> 27

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Asp	Xaa	Ser	Ala
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 28

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(26)

<223> Xaa = any amino acid

<400> 28

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Lys
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 29

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(26)

<223> Xaa = any amino acid

<400> 29

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Glu
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 30

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 30
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Thr His
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 31
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 31
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser His
 1 5 10 15
 Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 32
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 32
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Trp Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 33
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(26)
 <223> Xaa = any amino acid

<400> 33

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 34

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(26)

<223> Xaa = any amino acid

<400> 34

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Asn
1				5					10					15	
Xaa	Xaa	Lys	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 35

<211> 96

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(96)

<223> Xaa = any amino acid

<400> 35

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	
Xaa	Xaa	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa
			20					25				30			
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa
			35				40				45				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa
			50				55				60				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa
65						70				75				80	
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His
				85					90					95	

<210> 36

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 36

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35						40				45			
Ser	Asn	Xaa	Xaa	Lys	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa
	50				55						60				
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa
65				70						75					80
Cys	Xaa	Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	His	
			85						90						

<210> 37

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 37

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35						40				45			
Ser	Asn	Xaa	Xaa	Lys	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	His	
	50				55							60			

<210> 38

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 38

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	Asn
1				5					10					15	


```

Xaa Xaa Lys His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
      20          25          30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa
      35          40          45
Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa His
      50          55          60

```

```

<210> 39
<211> 128
<212> PRT
<213> Artificial Sequence

```

```

<220>
<223> purified polypeptide

```

```

<221> VARIANT
<222> (1)...(128)
<223> Xaa = any amino acid

```

```

<400> 39
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Arg Xaa Asp Lys
 1          5          10          15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
      20          25          30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Gln Xaa
      35          40          45
Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
      50          55          60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
      65          70          75          80
Val Xaa Ser Thr Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa
      85          90          95
Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
      100          105          110
Xaa Xaa Arg Xaa Asp Lys Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
      115          120          125

```

```

<210> 40
<211> 94
<212> PRT
<213> Artificial Sequence

```

```

<220>
<223> purified polypeptide

```

```

<221> VARIANT
<222> (1)...(94)
<223> Xaa = any amino acid

```

```

<400> 40
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Arg Xaa Asp Lys
 1          5          10          15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
      20          25          30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Gln Xaa
      35          40          45
Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa

```

50		55		60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa				
65		70		75
Val Xaa Ser Thr Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His				80
	85		90	

<210> 41
 <211> 94
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(94)
 <223> Xaa = any amino acid

<400> 41
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Thr His
1 5 10 15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Val Xaa
35 40 45
Ser Thr Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
50 55 60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
65 70 75 80
Arg Xaa Asp Lys Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
85 90

<210> 42
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 42
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp Lys
1 5 10 15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
35 40 45
Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
50 55 60

<210> 43
 <211> 60
 <212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 43

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Xaa	Ser	Thr
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
		35					40					45			
Asp	Lys	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
	50					55					60				

<210> 44

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 44

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
		35					40					45			
Asp	His	Xaa	Xaa	Thr	His	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa
	50					55				60					
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65				70					75					80	
Val	Xaa	Ser	Ser	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His		
				85				90							

<210> 45

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 45

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Ser His
 1           5           10           15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20           25           30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 35           40           45
Asp His Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His
 50           55           60

```

<210> 46

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 46

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp His
 1           5           10           15
Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20           25           30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Val Xaa
 35           40           45
Ser Ser Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 50           55           60

```

<210> 47

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 47

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Asn
 1           5           10           15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20           25           30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa
 35           40           45
Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50           55           60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65           70           75           80
Asp Xaa Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 85           90

```

<210> 48
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 48
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa
 35 40 45
 Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 50 55 60

<210> 49
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 49
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Asn
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa
 35 40 45
 Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 50 55 60

<210> 50
 <211> 128
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(128)
 <223> Xaa = any amino acid

<400> 50

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Val	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
		20						25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa
		35					40					45			
Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa
	50					55				60					
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65				70					75						80
Trp	Xaa	Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa
			85					90					95		
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa
			100					105				110			
Xaa	Xaa	Arg	Xaa	Asp	Asn	Xaa	Xaa	Gln	His	Xaa	Xaa	Xaa	Xaa	Xaa	His
		115					120					125			

<210> 51

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 51

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
		20						25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Trp	Xaa
		35					40					45			
Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa
	50					55				60					
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65				70					75						80
Arg	Xaa	Asp	Asn	Xaa	Xaa	Gln	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	His	
			85					90							

<210> 52

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 52

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser His
 1           5           10           15
Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20           25           30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Trp Xaa
 35           40           45
Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50           55           60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65           70           75           80
Trp Xaa Ser Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
      85           90

```

<210> 53
 <211> 128
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(128)
 <223> Xaa = any amino acid

```

<400> 53
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Ala
 1           5           10           15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20           25           30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 35           40           45
Asp Lys Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50           55           60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65           70           75           80
Arg Xaa Asp Glu Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa
      85           90           95
Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
      100           105           110
Xaa Xaa Gln Xaa Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
      115           120           125

```

<210> 54
 <211> 93
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(93)
 <223> Xaa = any amino acid

```

<400> 54
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp Lys

```

1		5		10		15
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa
		20		25		30
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa
		35		40		45
Asp	Glu	Xaa	Xaa	Arg	His	Xaa
	50			55		60
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa
		65		70		75
Gln	Xaa	Thr	His	Xaa	Xaa	Xaa
		85		90		

<210> 55
 <211> 94
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(94)
 <223> Xaa = any amino acid

<400> 55
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Asp Xaa Ser Ala
1 5 10 15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
35 40 45
Asp Lys Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
50 55 60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
65 70 75 80
Arg Xaa Asp Glu Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
85 90

<210> 56
 <211> 128
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(128)
 <223> Xaa = any amino acid

<400> 56
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp His
1 5 10 15
Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
35 40 45


```

Ser Asn Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50                      55                      60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65                      70                      75                      80
Gln Xaa Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa
      85                      90                      95
Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa
      100                      105                      110
Xaa Xaa Gln Xaa Phe Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
      115                      120                      125

```

<210> 57

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 57

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp His
 1                      5                      10                      15
Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
      20                      25                      30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
      35                      40                      45
Ser Asn Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50                      55                      60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65                      70                      75                      80
Gln Xaa Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
      85                      90

```

<210> 58

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(94)

<223> Xaa = any amino acid

<400> 58

```

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Asn
 1                      5                      10                      15
Xaa Xaa Val His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
      20                      25                      30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
      35                      40                      45
Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa

```

50		55		60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa				
65		70		75
Gln Xaa Phe Asn Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His				80
	85		90	

<210> 59
 <211> 94
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(94)
 <223> Xaa = any amino acid

<400> 59
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser His
1 5 10 15
Xaa Xaa Val His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
35 40 45
Ser Ser Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
50 55 60
Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
65 70 75 80
Gln Xaa Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
85 90

<210> 60
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 60
Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Ser
1 5 10 15
Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
20 25 30
Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
35 40 45
Thr His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
50 55 60

<210> 61
 <211> 60
 <212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(60)

<223> Xaa = any amino acid

<400> 61

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Val	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35					40					45			
Ser	Ser	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
	50					55					60				

<210> 62

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1)...(128)

<223> Xaa = any amino acid

<400> 62

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Val	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35					40					45			
Ser	Asn	Xaa	Xaa	Ile	His	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa
	50					55				60					
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65				70					75					80	
Gln	Xaa	Thr	His	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa
			85					90					95		
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa
			100					105				110			
Xaa	Xaa	Cys	Xaa	Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His
		115						120					125		

<210> 63

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> (1) ... (128)

<223> Xaa = any amino acid

<400> 63

Cys 1	Xaa	Xaa	Xaa	Xaa 5	Xaa	Cys	Xaa	Xaa	Xaa 10	Xaa	Xaa	Gln	Xaa	Ser 15	His
Xaa	Xaa	Val	His 20	Xaa	Xaa	Xaa	Xaa	Xaa 25	His	Xaa	Xaa	Xaa	Xaa 30	Xaa	Xaa
Xaa	Xaa	Cys 35	Xaa	Xaa	Xaa	Xaa	Xaa 40	Cys	Xaa	Xaa	Xaa	Xaa 45	Xaa	Val	Xaa
Ser 50	Thr	Xaa	Xaa	Arg	His	Xaa 55	Xaa	Xaa	Xaa	Xaa	His 60	Xaa	Xaa	Xaa	Xaa
Xaa 65	Xaa	Xaa	Xaa	Cys 70	Xaa	Xaa	Xaa	Xaa 75	Xaa	Cys	Xaa	Xaa	Xaa 80	Xaa	Xaa
Arg	Xaa	Asp	Asn	Xaa 85	Xaa	Gln	His	Xaa 90	Xaa	Xaa	Xaa	Xaa	His 95	Xaa	Xaa
Xaa	Xaa	Xaa	Xaa 100	Xaa	Xaa	Cys	Xaa 105	Xaa	Xaa	Xaa	Xaa	Cys 110	Xaa	Xaa	Xaa
Xaa	Xaa	Gln 115	Xaa	Thr	His	Xaa 120	Xaa	Arg	His	Xaa	Xaa	Xaa 125	Xaa	Xaa	His

<210> 64

<211> 181

<212> PRT

<213> Artificial Sequence

 $\langle 220 \rangle$

<223> plasmid sequence

<400> 64

[illegible]

<210> 65
 <211> 94
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide
 <221> VARIANT
 <222> (1)...(94)
 <223> Xaa = any amino acid

<400> 65
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Asp His
 1 5 10 15
 Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 35 40 45
 Ser His Xaa Xaa Arg His Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa
 50 55 60
 Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa
 65 70 75 80
 Gln Xaa Ser His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 85 90

<210> 66
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide
 <221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 66
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa Ser His
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa
 35 40 45
 Ser His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 50 55 60

<210> 67
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 67

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	His
1				5					10					15	
Xaa	Xaa	Thr	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
		35					40					45			
Ser	His	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
	50					55					60				

<210> 68
 <211> 94
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(94)
 <223> Xaa = any amino acid

<400> 68

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Thr	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa
		35					40					45			
Ser	His	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa
	50					55					60				
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa
65					70					75					80
Arg	Xaa	Asp	His	Xaa	Xaa	Thr	His	Xaa	Xaa	Xaa	Xaa	Xaa	His		
				85					90						

<210> 69
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 69

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Ser	His
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		

Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 35 40 45
 Asp His Xaa Xaa Thr His Xaa Xaa Xaa Xaa His
 50 55 60

<210> 70
 <211> 60
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> (1)...(60)
 <223> Xaa = any amino acid

<400> 70
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser His
 1 5 10 15
 Xaa Xaa Thr His Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Xaa Xaa Xaa
 20 25 30
 Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Arg Xaa
 35 40 45
 Ser His Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 50 55 60

<210> 71
 <211> 89
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 71
 Glu Arg Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser
 1 5 10 15
 Arg Ser Asp Glu Leu Thr Arg His Ile Arg Ile His Thr Gly Gln Lys
 20 25 30
 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp His
 35 40 45
 Leu Thr Thr His Ile Arg Thr His Thr Gly Glu Lys Pro Phe Ala Cys
 50 55 60
 Asp Ile Cys Gly Arg Lys Phe Ala Arg Ser Asp Glu Arg Lys Arg His
 65 70 75 80
 Thr Lys Ile His Leu Arg Gln Lys Asp
 85

<210> 72
 <211> 28
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> coordinating residue

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2, 4-8, 10-12, 14-18, 20-21, 23-27

<223> Xaa = any amino acid

<400> 72

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1				5				10						15	
Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
				20				25							

<210> 73

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 1, 13

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 19

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2, 4-8, 10-12, 14, 16, 20, 23-27

<223> Xaa = any amino acid

<400> 73

Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa
1				5				10						15	
Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His				
				20				25							

<210> 74

<211> 6

<212> PRT

<213> Eukaryote

<220>

<221> VARIANT

<222> 3

<223> Xaa = Glu or Gln

<221> VARIANT

<222> 4

<223> Xaa = Lys or Arg

<221> VARIANT

<222> 6

<223> Xaa = Tyr or Phe

<400> 74

Thr Gly Xaa Xaa Pro Xaa

1 5

<210> 75

<211> 23

<212> PRT

<213> Homo sapiens

<400> 75

Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu

1 5 10 15

Arg Arg His Gly Arg Thr His

20

<210> 76

<211> 23

<212> PRT

<213> Homo sapiens

<400> 76

Tyr Gln Cys Asn Ile Cys Gly Lys Cys Phe Ser Cys Asn Ser Asn Leu

1 5 10 15

His Arg His Gln Arg Thr His

20

<210> 77

<211> 23

<212> PRT

<213> Homo sapiens

<400> 77

Tyr Ser Cys Gly Ile Cys Gly Lys Ser Phe Ser Asp Ser Ser Ala Lys

1 5 10 15

Arg Arg His Cys Ile Leu His

20

<210> 78

<211> 23

<212> PRT

<213> Homo sapiens

<400> 78

Tyr Thr Cys Ser Asp Cys Gly Lys Ala Phe Arg Asp Lys Ser Cys Leu

1 5 10 15

Asn Arg His Arg Arg Thr His

20

<210> 79

<211> 23

<212> PRT

<213> Homo sapiens

<400> 79

Tyr	Lys	Cys	Lys	Glu	Cys	Gly	Lys	Ala	Phe	Asn	His	Ser	Ser	Asn	Phe
1				5					10					15	
Asn	Lys	His	His	Arg	Ile	His									
				20											

<210> 80

<211> 23

<212> PRT

<213> Homo sapiens

<400> 80

Phe	Lys	Cys	Pro	Val	Cys	Gly	Lys	Ala	Phe	Arg	His	Ser	Ser	Ser	Leu
1				5					10					15	
Val	Arg	His	Gln	Arg	Thr	His									
				20											

<210> 81

<211> 24

<212> PRT

<213> Homo sapiens

<400> 81

Tyr	Arg	Cys	Lys	Tyr	Cys	Asp	Arg	Ser	Phe	Ser	Ile	Ser	Ser	Asn	Leu
1				5					10					15	
Gln	Arg	His	Val	Arg	Asn	Ile	His								
				20											

<210> 82

<211> 23

<212> PRT

<213> Homo sapiens

<400> 82

Tyr	Glu	Cys	Asp	His	Cys	Gly	Lys	Ala	Phe	Ser	Ile	Gly	Ser	Asn	Leu
1				5					10					15	
Asn	Val	His	Arg	Arg	Ile	His									
				20											

<210> 83

<211> 23

<212> PRT

<213> Homo sapiens

<400> 83

Tyr	Gly	Cys	His	Leu	Cys	Gly	Lys	Ala	Phe	Ser	Lys	Ser	Ser	Asn	Leu
1				5					10					15	
Arg	Arg	His	Glu	Met	Ile	His									
				20											

<210> 84

<211> 23

<212> PRT

<213> Homo sapiens

<400> 84

Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu
 1 5 10 15
 Ile Arg His His Lys Leu His
 20

<210> 85
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 85
 Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
 1 5 10 15
 Arg Arg His Glu Arg Thr His
 20

<210> 86
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 86
 Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
 1 5 10 15
 Leu Arg His Ile Lys Leu His
 20

<210> 87
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 87
 Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Ser Ser His Leu
 1 5 10 15
 Arg Arg His Glu Lys Thr His
 20

<210> 88
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 88
 Tyr Lys Cys Gly Gln Cys Gly Lys Phe Tyr Ser Gln Val Ser His Leu
 1 5 10 15
 Thr Arg His Gln Lys Ile His
 20

<210> 89
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 89
 Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Cys Ser His Leu
 1 5 10 15

Arg Arg His Glu Lys Thr His
20

<210> 90
<211> 23
<212> PRT
<213> Homo sapiens

<400> 90
Tyr Ala Cys His Leu Cys Ala Lys Ala Phe Ile Gln Cys Ser His Leu
1 5 10 15
Arg Arg His Glu Lys Thr His
20

<210> 91
<211> 23
<212> PRT
<213> Homo sapiens

<400> 91
Tyr Val Cys Arg Glu Cys Gly Arg Gly Phe Arg Gln His Ser His Leu
1 5 10 15
Val Arg His Lys Arg Thr His
20

<210> 92
<211> 23
<212> PRT
<213> Homo sapiens

<400> 92
Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
1 5 10 15
Thr Thr His Lys Ile Ile His
20

<210> 93
<211> 23
<212> PRT
<213> Homo sapiens

<400> 93
Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
1 5 10 15
Asn Val His Lys Arg Thr His
20

<210> 94
<211> 23
<212> PRT
<213> Homo sapiens

<400> 94
Tyr Met Cys Ser Glu Cys Gly Arg Gly Phe Ser Gln Lys Ser Asn Leu
1 5 10 15
Ile Ile His Gln Arg Thr His
20

<210> 95
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 95
 Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
 1 5 10 15
 Thr Lys His Lys Lys Ile His
 20

<210> 96
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 96
 Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 97
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 97
 Tyr Val Cys Arg Glu Cys Arg Arg Gly Phe Ser Gln Lys Ser Asn Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 98
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 98
 Tyr Glu Cys Glu Lys Cys Gly Lys Ala Phe Asn Gln Ser Ser Asn Leu
 1 5 10 15
 Thr Arg His Lys Lys Ser His
 20

<210> 99
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 99
 Tyr Glu Cys Asn Thr Cys Arg Lys Thr Phe Ser Gln Lys Ser Asn Leu
 1 5 10 15
 Ile Val His Gln Arg Thr His
 20

<210> 100

<211> 23
 <212> PRT
 <213> Homo sapiens

<400> 100
 Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
 1 5 10 15
 Thr Val His Gln Lys Ile His
 20

<210> 101
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 101
 Tyr Lys Cys Asp Glu Cys Gly Lys Asn Phe Thr Gln Ser Ser Asn Leu
 1 5 10 15
 Ile Val His Lys Arg Ile His
 20

<210> 102
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 102
 Tyr Glu Cys Asp Val Cys Gly Lys Thr Phe Thr Gln Lys Ser Asn Leu
 1 5 10 15
 Gly Val His Gln Arg Thr His
 20

<210> 103
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 103
 Tyr Glu Cys Val Gln Cys Gly Lys Gly Phe Thr Gln Ser Ser Asn Leu
 1 5 10 15
 Ile Thr His Gln Arg Val His
 20

<210> 104
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 104
 Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 105
 <211> 23
 <212> PRT

<213> Homo sapiens

<400> 105

Tyr	Glu	Cys	Gln	Asp	Cys	Gly	Arg	Ala	Phe	Asn	Gln	Asn	Ser	Ser	Leu
1				5					10					15	
Gly	Arg	His	Lys	Arg	Thr	His									
			20												

<210> 106

<211> 23

<212> PRT

<213> Homo sapiens

<400> 106

Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Phe	Phe	Ser	Gln	Ser	Ser	Ser	Leu
1				5					10					15	
Ile	Arg	His	Arg	Arg	Ser	His									
			20												

<210> 107

<211> 23

<212> PRT

<213> Homo sapiens

<400> 107

Tyr	Lys	Cys	Glu	Glu	Cys	Gly	Lys	Ala	Phe	Asn	Gln	Ser	Ser	Thr	Leu
1				5					10					15	
Thr	Arg	His	Lys	Ile	Val	His									
			20												

<210> 108

<211> 23

<212> PRT

<213> Homo sapiens

<400> 108

Tyr	Glu	Cys	Asn	Glu	Cys	Gly	Lys	Ala	Phe	Ala	Gln	Asn	Ser	Thr	Leu
1				5					10					15	
Arg	Val	His	Gln	Arg	Ile	His									
			20												

<210> 109

<211> 23

<212> PRT

<213> Homo sapiens

<400> 109

Tyr	Glu	Cys	His	Asp	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Ser	Thr	His	Leu
1				5					10					15	
Thr	Gln	His	Arg	Arg	Ile	His									
			20												

<210> 110

<211> 23

<212> PRT

<213> Homo sapiens

<400> 110
 Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
 1 5 10 15
 Thr Arg His Arg Arg Ile His
 20

<210> 111
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 111
 His Lys Cys Leu Glu Cys Gly Lys Cys Phe Ser Gln Asn Thr His Leu
 1 5 10 15
 Thr Arg His Gln Arg Thr
 20

<210> 112
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 112
 Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Asn Arg His Lys Lys Arg His
 20 25

<210> 113
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 113
 Tyr His Cys Asp Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Thr Arg His Tyr Arg Lys His
 20 25

<210> 114
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 114
 Tyr Arg Cys Ser Trp Glu Gly Cys Glu Trp Arg Phe Ala Arg Ser Asp
 1 5 10 15
 Glu Leu Thr Arg His Phe Arg Lys His
 20 25

<210> 115
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 115
 Phe Ser Cys Ser Trp Lys Gly Cys Glu Arg Arg Phe Ala Arg Ser Asp

1 5 10 15
Glu Leu Ser Arg His Arg Arg Thr His
20 25

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<210> 116
<211> 25
<212> PRT
<213> Homo sapiens
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```

<400> 116
Phe Ala Cys Ser Trp Gln Asp Cys Asn Lys Lys Phe Ala Arg Ser Asp
 1          5          10          15
Glu Leu Ala Arg His Tyr Arg Thr His
      20          25

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<210> 117
<211> 25
<212> PRT
<213> Homo sapiens
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<400> 117
Tyr His Cys Asn Trp Asp Gly Cys Gly Trp Lys Phe Ala Arg Ser Asp
 1          5          10          15
Glu Leu Thr Arg His Tyr Arg Lys His
      20      25

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<210> 118
<211> 24
<212> PRT
<213> Homo sapiens
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<400> 118
Phe Leu Cys Gln Tyr Cys Ala Gln Arg Phe Gly Arg Lys Asp His Leu
 1           5           10          15
Thr Arg His Met Lys Lys Ser His
      20
```

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<210> 119
<211> 23
<212> PRT
<213> Homo sapiens
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```

<400> 119
Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
 1          5          10          15
Lys Thr His Thr Arg Thr His
      20

```

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<210> 120
<211> 23
<212> PRT
<213> Homo sapiens
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<400> 120
Phe Ala Cys Glu Val Cys Gly Val Arg Phe Thr Arg Asn Asp Lys Leu
1 5 10 15
Lys Ile His Met Arg Lys His

20

<210> 121
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 121
 Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
 1 5 10 15
 Lys Leu Asn Arg His Lys Lys Arg His
 20 25

<210> 122
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 122
 Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
 1 5 10 15
 Thr Arg His Gln Arg Ile His
 20

<210> 123
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 123
 Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 124
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 124
 Tyr Leu Cys Ser Glu Cys Asp Lys Cys Phe Ser Arg Ser Thr Asn Leu
 1 5 10 15
 Ile Arg His Arg Arg Thr His
 20

<210> 125
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 125
 Tyr Glu Cys Lys Glu Cys Gly Lys Ala Phe Ser Ser Gly Ser Asn Phe
 1 5 10 15
 Thr Arg His Gln Arg Ile His
 20

<210> 126
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 126
 Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
 1 5 10 15
 Asn Val His Arg Arg Ile His
 20

<210> 127
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 127
 Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu
 1 5 10 15
 Arg Arg His Glu Thr Thr His
 20

<210> 128
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 128
 Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu
 1 5 10 15
 Ile Arg His Gln Arg Ile His
 20

<210> 129
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 129
 Tyr Arg Cys Glu Glu Cys Gly Lys Ala Phe Arg Trp Pro Ser Asn Leu
 1 5 10 15
 Thr Arg His Lys Arg Ile His
 20

<210> 130
 <211> 10
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target site

<400> 130
 gaagaggacc

10

<210> 131
 <211> 260

<212> PRT

<213> Homo sapiens

<400> 131

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Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys
1      5      10      15
Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser
20      25      30
Gly Pro Thr Asp Pro Arg Pro Pro Arg Arg Ile Ala Val Pro Ser
35      40      45
Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe
50      55      60
Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val
65      70      75      80
Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro
85      90      95
Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met
100     105     110
Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro
115     120     125
Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala
130     135     140
Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp
145     150     155     160
Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe
165     170     175
Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn
180     185     190
Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu
195     200     205
Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Ala Gln Arg Pro Pro Asp
210     215     220
Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
225     230     235     240
Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
245     250     255
Leu Leu Ser Gln
260

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<210> 132

<211> 127

<212> PRT

<213> Saccharomyces cerevisiae

<400> 132

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Asn Phe Asn Gln Ser Gly Asn Ile Ala Asp Ser Ser Leu Ser Phe Thr
1      5      10      15
Phe Thr Asn Ser Ser Asn Gly Pro Asn Leu Ile Thr Thr Gln Thr Asn
20      25      30
Ser Gln Ala Leu Ser Gln Pro Ile Ala Ser Ser Asn Val His Asp Asn
35      40      45
Phe Met Asn Asn Glu Ile Thr Ala Ser Lys Ile Asp Asp Gly Asn Asn
50      55      60
Ser Lys Pro Leu Ser Pro Gly Trp Thr Asp Gln Thr Ala Tyr Asn Ala
65      70      75      80
Phe Gly Ile Thr Thr Gly Met Phe Asn Thr Thr Thr Met Asp Asp Val
85      90      95

```

Tyr Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn Pro Lys Lys
 100 105 110
 Glu Ile Ser Met Ala Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Ser
 115 120 125

<210> 133
 <211> 90
 <212> PRT
 <213> *Saccharomyces cerevisiae*

<400> 133
 Asn Ser Ala Ser Ser Ser Thr Lys Leu Asp Asp Asp Leu Gly Thr Ala
 1 5 10 15
 Ala Ala Val Leu Ser Asn Met Arg Ser Ser Pro Tyr Arg Thr His Asp
 20 25 30
 Lys Pro Ile Ser Asn Val Asn Asp Met Asn Asn Thr Asn Ala Leu Gly
 35 40 45
 Val Pro Ala Ser Arg Pro His Ser Ser Ser Phe Pro Ser Lys Gly Val
 50 55 60
 Leu Arg Pro Ile Leu Leu Arg Ile His Asn Ser Glu Gln Gln Pro Ile
 65 70 75 80
 Phe Glu Ser Asn Asn Ser Thr Ala Cys Ile
 85 90

<210> 134
 <211> 63
 <212> PRT
 <213> *Homo sapiens*

<400> 134
 Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg Asp Glu
 1 5 10 15
 Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu Val Met
 20 25 30
 Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu Phe Thr
 35 40 45
 Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro Trp
 50 55 60

<210> 135
 <211> 207
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 135
 taatacgact cactataggg aatattaagc taagctcacc atgggtaagc ctatccctaa 60
 ccctctcctc ggtctcgatt ctacacaagc tatgggtgct cctccaaaaa agaagagaaa 120
 ggtagctgga tccactagta acggcgcgca gtgtgctgga attctgcaga tatccatcac 180
 actggcggcg ctcgaggcac gcattcta 207

<210> 136
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

 <400> 136
 cgatctgcag ggtccttttc atcacgtgct 30

 <210> 137
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 137
 cgatcgatgc cggcggacgg atcgcttgcc t 31

 <210> 138
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 138
 aattccatgg gtaagcctat ccctaacc 28

 <210> 139
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 139
 aattggatcc agctaccttt ctcttctt 28

 <210> 140
 <211> 43
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 140
 aaggaaggaa ggaagcggcc gcagccaatt ttaatcaaag tgg 43

 <210> 141
 <211> 32
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> primer

<400> 141

acatacatgc atgcgccgtt actagtggat cc

32

<210> 142

<211> 474

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 142

ggccgccagt gtgctggaat tctgcagata tccatcacac tggcgccgc agccaatttt	60
aatcaaagtg ggaatattgc tgatagctca ttgtccttca ctttactaa cagtagcaac	120
ggtccgaacc tcataacaac tcaaacaaat tctcaagcgc tttcacaacc aattgcctcc	180
tctaacgttc atgataactt catgaataat gaaatcacgg ctagtaaaat tgatgatggt	240
aataattcaa aaccactgtc acctgggttg acggaccaa ctgctataa cgcgtttgga	300
atcactacag ggatgtttta taccactaca atggatgatg tatataacta tctattcgat	360
gatgaagata cccacacaaa cccaaaaaaa gagatctcta tggcttacc atacgatgtt	420
ccagattacg ctagctaagg atccactagt aacggcgcgc gcctctagag ggcc	474

<210> 143

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 143

aaggaaggaa ggaagcggcc gcaaattctg catcttcac tacc

44

<210> 144

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 144

acatacatgc atgctgtaga attgttgctt tcg

33

<210> 145

<211> 330

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 145

ggccgccagt gtgctggaat tctgcagata tccatcacac tggcgccgc aaattctgca	60
tcttcaccta ccaaactaga cgacgacttg ggtacagcag cagcagtgt atcaaacatg	120
agatcatccc catatagaac tcatgataaa cccatttcca atgtcaatga catgaataac	180

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acaaatgcgc tcggtgtgcc ggctagtagg cctcattcgt catcttttcc atcaaagggt 240
gtcttaagac caattctgtt acgtatccat aattccgaac aacaacccat tttcgaaagc 300
aacaattcta cagcatgcat ctagagggcc 330

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<210> 146
<211> 25
<212> PRT
<213> Homo sapiens

```

```

<400> 146
Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg Phe Thr Asp Arg Ser
 1             5             10             15
Ala Leu Ala Arg His Lys Arg Thr His
          20             25

```

```

<210> 147
<211> 25
<212> PRT
<213> Homo sapiens

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```

<400> 147
His Ile Cys His Ile Gln Gly Cys Gly Lys Val Tyr Gly Asp Arg Ser
 1             5             10             15
His Leu Thr Arg His Leu Arg Trp His
          20             25

```

```

<210> 148
<211> 23
<212> PRT
<213> Homo sapiens

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```

<400> 148
Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Asp Ser Ser Lys Leu
 1             5             10             15
Ser Arg His Ile Lys Thr His
          20

```

```

<210> 149
<211> 25
<212> PRT
<213> Homo sapiens

```

```

<400> 149
Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser Asp Ser Ser
 1             5             10             15
Asn Leu Thr Arg His Ile Arg Ile His
          20             25

```

```

<210> 150
<211> 25
<212> PRT
<213> Homo sapiens

```

```

<400> 150
His Ile Cys His Ile Gln Gly Cys Gly Lys Val Tyr Gly Asp Arg Ser
 1             5             10             15
Ser Leu Thr Arg His Leu Arg Trp His

```


20

25

<210> 151
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 151
 Tyr Lys Cys Lys Glu Cys Gly Lys Ala Phe Asn His Ser Ser Asn Phe
 1 5 10 15
 Asn Lys His His Arg Ile His
 20

<210> 152
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 152
 Phe Lys Cys Pro Val Cys Gly Lys Ala Phe Arg His Ser Ser Ser Leu
 1 5 10 15
 Val Arg His Gln Arg Thr His
 20

<210> 153
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 153
 Tyr Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu
 1 5 10 15
 Gln Arg His Val Arg Asn Ile His
 20

<210> 154
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 154
 Tyr Gly Cys His Leu Cys Gly Lys Ala Phe Ser Lys Ser Ser Asn Leu
 1 5 10 15
 Arg Arg His Glu Met Ile His
 20

<210> 155
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 155
 Tyr Lys Cys Lys Glu Cys Gly Gln Ala Phe Arg Gln Arg Ala His Leu
 1 5 10 15
 Ile Arg His His Lys Leu His
 20

<210> 156
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 156
 Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn Leu
 1 5 10 15
 Arg Arg His Glu Arg Thr His
 20

<210> 157
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 157
 Phe Gln Cys Asn Gln Cys Gly Ala Ser Phe Thr Gln Lys Gly Asn Leu
 1 5 10 15
 Leu Arg His Ile Lys Leu His
 20

<210> 158
 <211> 23
 <212> PRT
 <213> Drosophila melanogaster

<400> 158
 Tyr Thr Cys Ser Tyr Cys Gly Lys Ser Phe Thr Gln Ser Asn Thr Leu
 1 5 10 15
 Lys Gln His Thr Arg Ile His
 20

<210> 159
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 159
 Tyr Val Cys Arg Glu Cys Gly Arg Gly Phe Arg Gln His Ser His Leu
 1 5 10 15
 Val Arg His Lys Arg Thr His
 20

<210> 160
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 160
 Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu
 1 5 10 15
 Asn Val His Lys Arg Thr His
 20

<210> 161
 <211> 23

<212> PRT

<213> Homo sapiens

<400> 161

Tyr	Met	Cys	Ser	Glu	Cys	Gly	Arg	Gly	Phe	Ser	Gln	Lys	Ser	Asn	Leu
1				5					10					15	
Ile	Ile	His	Gln	Arg	Thr	His									
			20												

<210> 162

<211> 23

<212> PRT

<213> Homo sapiens

<400> 162

Tyr	Lys	Cys	Glu	Glu	Cys	Gly	Lys	Ala	Phe	Thr	Gln	Ser	Ser	Asn	Leu
1				5					10					15	
Thr	Lys	His	Lys	Lys	Ile	His									
			20												

<210> 163

<211> 23

<212> PRT

<213> Homo sapiens

<400> 163

Tyr	Lys	Cys	Glu	Glu	Cys	Gly	Lys	Ala	Phe	Asn	Gln	Ser	Ser	Thr	Leu
1				5					10					15	
Thr	Arg	His	Lys	Ile	Val	His									
			20												

<210> 164

<211> 23

<212> PRT

<213> Homo sapiens

<400> 164

Tyr	Glu	Cys	His	Asp	Cys	Gly	Lys	Ser	Phe	Arg	Gln	Ser	Thr	His	Leu
1				5					10					15	
Thr	Arg	His	Arg	Arg	Ile	His									
			20												

<210> 165

<211> 24

<212> PRT

<213> Homo sapiens

<400> 165

Phe	Leu	Cys	Gln	Tyr	Cys	Ala	Gln	Arg	Phe	Gly	Arg	Lys	Asp	His	Leu
1				5					10					15	
Thr	Arg	His	Met	Lys	Lys	Ser	His								
			20												

<210> 166

<211> 25

<212> PRT

<213> Homo sapiens

<400> 166

Tyr	Val	Cys	Asp	Val	Glu	Gly	Cys	Thr	Trp	Lys	Phe	Ala	Arg	Ser	Asp
1				5					10					15	
Lys	Leu	Asn	Arg	His	Lys	Lys	Arg	His							
			20					25							

<210> 167

<211> 23

<212> PRT

<213> Homo sapiens

<400> 167

Phe	Ala	Cys	Pro	Glu	Cys	Pro	Lys	Arg	Phe	Met	Arg	Ser	Asp	Asn	Leu
1				5					10					15	
Thr	Gln	His	Ile	Lys	Thr	His									
			20												

<210> 168

<211> 23

<212> PRT

<213> Homo sapiens

<400> 168

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Ser	Pro	Ala	Asp	Leu
1				5					10					15	
Thr	Arg	His	Ile	Arg	Thr	His									
			20												

<210> 169

<211> 23

<212> PRT

<213> Homo sapiens

<400> 169

Tyr	Glu	Cys	Lys	Glu	Cys	Gly	Lys	Ala	Phe	Ser	Ser	Gly	Ser	Asn	Phe
1				5					10					15	
Thr	Arg	His	Gln	Arg	Ile	His									
			20												

<210> 170

<211> 23

<212> PRT

<213> Homo sapiens

<400> 170

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Thr	His	Ile	Asp	Leu
1				5					10					15	
Ile	Arg	His	Ile	Arg	Thr	His									
			20												

<210> 171

<211> 23

<212> PRT

<213> Homo sapiens

<400> 171

Tyr Glu Cys Asp His Cys Gly Lys Ala Phe Ser Val Ser Ser Asn Leu
 1 5 10 15
 Asn Val His Arg Arg Ile His
 20

<210> 172
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 172
 Tyr Glu Cys Asn Tyr Cys Gly Lys Thr Phe Ser Val Ser Ser Thr Leu
 1 5 10 15
 Ile Arg His Gln Arg Ile His
 20

<210> 173
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 173
 Tyr Lys Cys Lys Gln Cys Gly Lys Ala Phe Gly Cys Pro Ser Asn Leu
 1 5 10 15
 Arg Arg His Gly Arg Thr His
 20

<210> 174
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 174
 Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Ser Gly Asn Leu
 1 5 10 15
 Arg Val His Ile Arg Thr His
 20

<210> 175
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 175
 Tyr Ala Cys His Leu Cys Gly Lys Ala Phe Thr Gln Cys Ser His Leu
 1 5 10 15
 Arg Arg His Glu Lys Thr His
 20

<210> 176
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 176
 Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu
 1 5 10 15

Thr Thr His Lys Ile Ile His
20

<210> 177
<211> 23
<212> PRT
<213> Homo sapiens

<400> 177
Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys Ser Asn Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 178
<211> 23
<212> PRT
<213> Homo sapiens

<400> 178
Tyr Val Cys Ser Lys Cys Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu
1 5 10 15
Thr Val His Gln Lys Ile His
20

<210> 179
<211> 23
<212> PRT
<213> Homo sapiens

<400> 179
Tyr Lys Cys Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu
1 5 10 15
Ile Arg His Gln Arg Thr His
20

<210> 180
<211> 23
<212> PRT
<213> Homo sapiens

<400> 180
Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu
1 5 10 15
Thr Gln His Arg Arg Ile His
20

<210> 181
<211> 25
<212> PRT
<213> Homo sapiens

<400> 181
Tyr Val Cys Asp Val Glu Gly Cys Thr Trp Lys Phe Ala Arg Ser Asp
1 5 10 15
Glu Leu Asn Arg His Lys Lys Arg His
20 25

<210> 182
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 182
 Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu
 1 5 10 15
 Lys Thr His Thr Arg Thr His
 20

<210> 183
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 183
 Tyr Lys Cys Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu
 1 5 10 15
 Thr Arg His Gln Arg Ile His
 20

<210> 184
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 184
 Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn Leu
 1 5 10 15
 Ile Arg His Gln Arg Thr His
 20

<210> 185
 <211> 22
 <212> PRT
 <213> Drosophila melanogaster

<400> 185
 Phe His Cys Gly Tyr Cys Glu Lys Ser Phe Ser Val Lys Asp Tyr Leu
 1 5 10 15
 Thr Lys Ile Arg Thr His
 20

<210> 186
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 186
 Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu
 1 5 10 15
 Arg Arg His Glu Thr Thr His
 20

<210> 187

<211> 23
 <212> PRT
 <213> Homo sapiens

<400> 187
 Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Pro Gly Ala Leu
 1 5 10 15
 Val Arg His Ile Arg Thr His
 20

<210> 188
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 188
 Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Pro Gly His Leu
 1 5 10 15
 Val Arg His Ile Arg Thr His
 20

<210> 189
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 189
 Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Pro Gly Asn Leu
 1 5 10 15
 Lys Arg His Ile Arg Thr His
 20

<210> 190
 <211> 23
 <212> PRT
 <213> Homo sapiens

<400> 190
 Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Cys Arg Asp Leu
 1 5 10 15
 Ala Arg His Ile Arg Thr His
 20

<210> 191
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 191
 Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg Phe Ser Met Ser His
 1 5 10 15
 His Leu Lys Glu His Ile Arg Thr His
 20 25

<210> 192
 <211> 23
 <212> PRT

<213> Homo sapiens

<400> 192

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Gln	Ala	Ser	Leu
1				5				10						15	
Asn	Ala	His	Ile	Arg	Thr	His									
			20												

<210> 193

<211> 23

<212> PRT

<213> Homo sapiens

<400> 193

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Ser	Gly	Asp	Leu
1				5				10						15	
Arg	Arg	His	Ile	Arg	Thr	His									
			20												

<210> 194

<211> 23

<212> PRT

<213> Homo sapiens

<400> 194

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Ser	Ser	Asp	Leu
1				5				10						15	
Val	Arg	His	Ile	Arg	Thr	His									
			20												

<210> 195

<211> 23

<212> PRT

<213> Homo sapiens

<400> 195

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Thr	Leu
1				5				10						15	
Thr	Arg	His	Ile	Arg	Thr	His									
			20												

<210> 196

<211> 23

<212> PRT

<213> Homo sapiens

<400> 196

Phe	Gln	Cys	Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Arg	Ser	Asp	Thr	Leu
1				5				10						15	
Ser	Asn	His	Ile	Arg	Thr	His									
			20												

<210> 197

<211> 23

<212> PRT

<213> Homo sapiens

<400> 197
Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Thr Ala Asp Lys Leu
1 5 10 15
Ser Arg His Ile Arg Thr His
20

<210> 198
<211> 23
<212> PRT
<213> Homo sapiens

<400> 198
Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Thr Ser Gly Asn Leu
1 5 10 15
Val Arg His Ile Arg Thr His
20

<210> 199
<211> 23
<212> PRT
<213> Homo sapiens

<400> 199
Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Thr His Ile Asp Leu
1 5 10 15
Ile Arg His Ile Arg Thr His
20

<210> 200
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<221> misc_feature
<222> (1)...(9)
<223> n = A,T,C or G

<400> 200
ngggavggg

9

<210> 201
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<221> misc_feature
<222> (1)...(9)
<223> n = A,T,C or G

<400> 201
ggknngggag

9

<210> 202
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 202
 nggggrantt

9

<210> 203
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 203
 gaangggct

9

<210> 204
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 204
 gtdaaggav

9

<210> 205
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 205
 ghgnggkgg

9

<210> 206
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 206
 hgaaaggaa 9

<210> 207
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 207
 nggghggaw 9

<210> 208
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 208
 hgangggya 9

<210> 209
 <211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(9)
 <223> n = A,T,C or G

<400> 209
 gaangggya 9

<210> 210

<211> 9
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 210
 ggggaghga

9

<210> 211
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 211
 hgagyagagg ag

12

<210> 212
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 212
 graacagagg ag

12

<210> 213
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 213
 hgaacagagg ag

12

<210> 214
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 214
 katgt daacg td

12

<210> 215
 <211> 12
 <212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 215

gcagtdgaat gt

12

<210> 216

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 216

ggcgyahgaa ac

12

<210> 217

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 217

aaghgaaagg tg

12

<210> 218

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<221> misc_feature

<222> (1)...(12)

<223> n = A,T,C or G

<400> 218

aachgahgan gg

12

<210> 219

<211> 9

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<221> misc_feature

<222> (1)...(9)

<223> n = A,T,C or G

<400> 219
hgahgangg

9

<210> 220
<211> 9
<212> DNA
<213> Artificial Sequence

<220>
<223> target sequence

<221> misc_feature
<222> (1)...(9)
<223> n = A,T,C or G

<400> 220
hgahgangg

9

<210> 221
<211> 210
<212> PRT
<213> Artificial Sequence

<220>
<223> plasmid sequence

<400> 221
Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
1 5 10 15
Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
20 25 30
Pro Gly Glu Lys Pro Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser
35 40 45
Gln Ser Ser His Leu Asn Val His Lys Arg Thr His Thr Gly Glu Lys
50 55 60
Pro Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe Asn
65 70 75 80
Leu Arg Arg His Glu Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys
85 90 95
Met Glu Cys Gly Lys Ala Phe Asn Arg Arg Ser His Leu Thr Arg His
100 105 110
Gln Arg Ile His Ala Ala Ala Ala Asn Ser Ala Ser Ser Ser Thr Lys
115 120 125
Leu Asp Asp Asp Leu Gly Thr Ala Ala Ala Val Leu Ser Asn Met Arg
130 135 140
Ser Ser Pro Tyr Arg Thr His Asp Lys Pro Ile Ser Asn Val Asn Asp
145 150 155 160
Met Asn Asn Thr Asn Ala Leu Gly Val Pro Ala Ser Arg Pro His Ser
165 170 175
Ser Ser Phe Pro Ser Lys Gly Val Leu Arg Pro Ile Leu Leu Arg Ile
180 185 190
His Asn Ser Glu Gln Gln Pro Ile Phe Glu Ser Asn Asn Ser Thr Ala
195 200 205
Cys Ile
210

<210> 222

<211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 222
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser
 35 40 45
 Arg Lys Ser Asn Leu Ile Arg His Gln Arg Thr His Thr Gly Glu Lys
 50 55 60
 Pro Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn
 65 70 75 80
 Leu Ile Arg His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys
 85 90 95
 Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu Ile Arg His
 100 105 110
 Gln Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Glu Glu Cys Gly
 115 120 125
 Lys Ala Phe Arg Gln Ser Ser His Leu Thr Thr His Lys Ile Ile His
 130 135 140
 Ala Ala Ala Ala Asn Ser Ala Ser Ser Ser Thr Lys Leu Asp Asp Asp
 145 150 155 160
 Leu Gly Thr Ala Ala Ala Val Leu Ser Asn Met Arg Ser Ser Pro Tyr
 165 170 175
 Arg Thr His Asp Lys Pro Ile Ser Asn Val Asn Asp Met Asn Asn Thr
 180 185 190
 Asn Ala Leu Gly Val Pro Ala Ser Arg Pro His Ser Ser Ser Phe Pro
 195 200 205
 Ser Lys Gly Val Leu Arg Pro Ile Leu Leu Arg Ile His Asn Ser Glu
 210 215 220
 Gln Gln Pro Ile Phe Glu Ser Asn Asn Ser Thr Ala Cys Ile
 225 230 235

<210> 223
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 223
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser
 35 40 45
 Arg Lys Ser Asn Leu Ile Arg His Gln Arg Thr His Thr Gly Glu Lys
 50 55 60
 Pro Tyr Ile Cys Arg Lys Cys Gly Arg Gly Phe Ser Arg Lys Ser Asn

65					70					75				80
Leu	Ile	Arg	His	Gln	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Gln Cys
				85					90					95
Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Thr	Leu	Thr	Arg His
			100					105					110	
Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Val	Cys	Arg	Glu	Cys Gly
			115				120					125		
Arg	Gly	Phe	Arg	Gln	His	Ser	His	Leu	Val	Arg	His	Lys	Arg	Thr His
			130			135					140			
Ala	Ala	Ala	Ala	Asn	Ser	Ala	Ser	Ser	Ser	Thr	Lys	Leu	Asp	Asp Asp
145				150						155				160
Leu	Gly	Thr	Ala	Ala	Ala	Val	Leu	Ser	Asn	Met	Arg	Ser	Ser	Pro Tyr
				165					170					175
Arg	Thr	His	Asp	Lys	Pro	Ile	Ser	Asn	Val	Asn	Asp	Met	Asn	Asn Thr
			180					185					190	
Asn	Ala	Leu	Gly	Val	Pro	Ala	Ser	Arg	Pro	His	Ser	Ser	Ser	Phe Pro
		195					200				205			
Ser	Lys	Gly	Val	Leu	Arg	Pro	Ile	Leu	Leu	Arg	Ile	His	Asn	Ser Glu
	210					215				220				
Gln	Gln	Pro	Ile	Phe	Glu	Ser	Asn	Asn	Ser	Thr	Ala	Cys	Ile	
225					230					235				

<210> 224

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 224

Met	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asn	Ser	Thr	Gln
1				5				10					15		
Ala	Met	Gly	Ala	Pro	Pro	Lys	Lys	Lys	Arg	Lys	Val	Gly	Ile	Arg	Ile
			20					25					30		
Pro	Gly	Glu	Lys	Pro	Tyr	Ile	Cys	Arg	Lys	Cys	Gly	Arg	Gly	Phe	Ser
		35				40					45				
Arg	Lys	Ser	Asn	Leu	Ile	Arg	His	Gln	Arg	Thr	His	Thr	Gly	Glu	Lys
	50				55					60					
Pro	Tyr	Ile	Cys	Arg	Lys	Cys	Gly	Arg	Gly	Phe	Ser	Arg	Lys	Ser	Asn
65				70				75						80	
Leu	Ile	Arg	His	Gln	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Phe	Gln Cys	
			85					90					95		
Arg	Ile	Cys	Met	Arg	Asn	Phe	Ser	Gln	Arg	Gly	Thr	Leu	Thr	Arg	His
			100					105					110		
Ile	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	His	Asp	Cys	Gly
			115				120					125			
Lys	Ser	Phe	Arg	Gln	Ser	Thr	His	Leu	Thr	Gln	His	Arg	Arg	Ile	His
		130				135					140				
Ala	Ala	Ala	Ala	Asn	Ser	Ala	Ser	Ser	Ser	Thr	Lys	Leu	Asp	Asp	Asp
145				150						155					160
Leu	Gly	Thr	Ala	Ala	Ala	Val	Leu	Ser	Asn	Met	Arg	Ser	Ser	Pro	Tyr
				165					170					175	
Arg	Thr	His	Asp	Lys	Pro	Ile	Ser	Asn	Val	Asn	Asp	Met	Asn	Asn	Thr
			180					185					190		
Asn	Ala	Leu	Gly	Val	Pro	Ala	Ser	Arg	Pro	His	Ser	Ser	Ser	Phe	Pro
	195						200					205			

Ser Lys Gly Val Leu Arg Pro Ile Leu Leu Arg Ile His Asn Ser Glu
 210 215 220
 Gln Gln Pro Ile Phe Glu Ser Asn Asn Ser Thr Ala Cys Ile
 225 230 235

<210> 225
 <211> 274
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 225
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Tyr Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser
 35 40 45
 Val Ser Ser Ser Leu Arg Arg His Glu Thr Thr His Thr Gly Glu Lys
 50 55 60
 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Asp Ser Gly Asn
 65 70 75 80
 Leu Arg Val His Ile Arg Thr His Thr Gly Glu Lys Pro Tyr Thr Cys
 85 90 95
 Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu Arg Arg His
 100 105 110
 Glu Thr Thr His Thr Gly Glu Lys Pro Phe His Cys Gly Tyr Cys Glu
 115 120 125
 Lys Ser Phe Ser Val Lys Asp Tyr Leu Thr Lys Ile Arg Thr His Ala
 130 135 140
 Ala Ala Ala Asn Phe Asn Gln Ser Gly Asn Ile Ala Asp Ser Ser Leu
 145 150 155 160
 Ser Phe Thr Phe Thr Asn Ser Ser Asn Gly Pro Asn Leu Ile Thr Thr
 165 170 175
 Gln Thr Asn Ser Gln Ala Leu Ser Gln Pro Ile Ala Ser Ser Asn Val
 180 185 190
 His Asp Asn Phe Met Asn Asn Glu Ile Thr Ala Ser Lys Ile Asp Asp
 195 200 205
 Gly Asn Asn Ser Lys Pro Leu Ser Pro Gly Trp Thr Asp Gln Thr Ala
 210 215 220
 Tyr Asn Ala Phe Gly Ile Thr Thr Gly Met Phe Asn Thr Thr Thr Met
 225 230 235 240
 Asp Asp Val Tyr Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro Asn
 245 250 255
 Pro Lys Lys Glu Ile Ser Met Ala Tyr Pro Tyr Asp Val Pro Asp Tyr
 260 265 270
 Ala Ser

<210> 226
 <211> 277
 <212> PRT
 <213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 226

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Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1          5          10          15
Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20          25          30
Pro Gly Glu Lys Pro Tyr Ala Cys Pro Val Glu Ser Cys Asp Arg Arg
 35          40          45
Phe Ser Met Ser His His Leu Lys Glu His Ile Arg Thr His Thr Gly
 50          55          60
Glu Lys Pro Phe Glu Cys Lys Asp Cys Gly Lys Ala Phe Ile Gln Lys
 65          70          75          80
Ser Asn Leu Ile Arg His Gln Arg Thr His Thr Gly Glu Lys Pro Tyr
 85          90          95
Thr Cys Lys Gln Cys Gly Lys Ala Phe Ser Val Ser Ser Ser Leu Arg
 100         105         110
Arg His Glu Thr Thr His Thr Gly Glu Lys Pro Phe Gln Cys Arg Ile
 115         120         125
Cys Met Arg Asn Phe Ser Gln Ser Gly Asp Leu Arg Arg His Ile Arg
 130         135         140
Thr His Ala Ala Ala Ala Asn Phe Asn Gln Ser Gly Asn Ile Ala Asp
 145         150         155         160
Ser Ser Leu Ser Phe Thr Phe Thr Asn Ser Ser Asn Gly Pro Asn Leu
 165         170         175
Ile Thr Thr Gln Thr Asn Ser Gln Ala Leu Ser Gln Pro Ile Ala Ser
 180         185         190
Ser Asn Val His Asp Asn Phe Met Asn Asn Glu Ile Thr Ala Ser Lys
 195         200         205
Ile Asp Asp Gly Asn Asn Ser Lys Pro Leu Ser Pro Gly Trp Thr Asp
 210         215         220
Gln Thr Ala Tyr Asn Ala Phe Gly Ile Thr Thr Gly Met Phe Asn Thr
 225         230         235         240
Thr Thr Met Asp Asp Val Tyr Asn Tyr Leu Phe Asp Asp Glu Asp Thr
 245         250         255
Pro Pro Asn Pro Lys Lys Glu Ile Ser Met Ala Tyr Pro Tyr Asp Val
 260         265         270
Pro Asp Tyr Ala Ser
 275

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<210> 227

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> plasmid sequence

<400> 227

```

Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1          5          10          15
Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20          25          30
Pro Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser
 35          40          45
Asp Ser Gly Asn Leu Arg Val His Ile Arg Thr His Thr Gly Glu Lys
 50          55          60

```

Pro Tyr Lys Cys Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His
 65 70 75 80
 Leu Thr Thr His Lys Ile Ile His Thr Gly Glu Lys Pro Tyr Lys Cys
 85 90 95
 Pro Asp Cys Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu Ile Arg His
 100 105 110
 Gln Arg Thr His Thr Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys Met
 115 120 125
 Arg Asn Phe Ser Asp Pro Gly His Leu Val Arg His Ile Arg Thr His
 130 135 140
 Ala Ala Ala Ala Asn Phe Asn Gln Ser Gly Asn Ile Ala Asp Ser Ser
 145 150 155 160
 Leu Ser Phe Thr Phe Thr Asn Ser Ser Asn Gly Pro Asn Leu Ile Thr
 165 170 175
 Thr Gln Thr Asn Ser Gln Ala Leu Ser Gln Pro Ile Ala Ser Ser Asn
 180 185 190
 Val His Asp Asn Phe Met Asn Asn Glu Ile Thr Ala Ser Lys Ile Asp
 195 200 205
 Asp Gly Asn Asn Ser Lys Pro Leu Ser Pro Gly Trp Thr Asp Gln Thr
 210 215 220
 Ala Tyr Asn Ala Phe Gly Ile Thr Thr Gly Met Phe Asn Thr Thr Thr
 225 230 235 240
 Met Asp Asp Val Tyr Asn Tyr Leu Phe Asp Asp Glu Asp Thr Pro Pro
 245 250 255
 Asn Pro Lys Lys Glu Ile Ser Met Ala Tyr Pro Tyr Asp Val Pro Asp
 260 265 270
 Tyr Ala Ser
 275

<210> 228
 <211> 158
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 228
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser
 35 40 45
 Asp Pro Gly Ala Leu Val Arg His Ile Arg Thr His Thr Gly Glu Lys
 50 55 60
 Pro Phe Gln Cys Arg Ile Cys Met Arg Asn Phe Ser Arg Ser Asp Thr
 65 70 75 80
 Leu Ser Asn His Ile Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys
 85 90 95
 His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His Leu Thr Gln His
 100 105 110
 Arg Arg Ile His Thr Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys Met
 115 120 125
 Arg Asn Phe Ser Arg Ser Asp Thr Leu Ser Asn His Ile Arg Thr His
 130 135 140
 Ala Ala Ala Ala Arg Gly Met His Leu Glu Gly Arg Ile Met

145 150 155

<210> 229
 <211> 158
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 229
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser
 35 40 45
 Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys
 50 55 60
 Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His
 65 70 75 80
 Leu Thr Gln His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys
 85 90 95
 Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu Thr Thr His
 100 105 110
 Lys Ile Ile His Thr Gly Glu Lys Pro Phe Gln Cys Arg Ile Cys Met
 115 120 125
 Arg Asn Phe Ser Asp Ser Gly Asn Leu Arg Val His Ile Arg Thr His
 130 135 140
 Ala Ala Ala Ala Arg Gly Met His Leu Glu Gly Arg Ile Met
 145 150 155

<210> 230
 <211> 130
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> plasmid sequence

<400> 230
 Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
 1 5 10 15
 Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
 20 25 30
 Pro Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser
 35 40 45
 Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys
 50 55 60
 Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe Arg Gln Ser Thr His
 65 70 75 80
 Leu Thr Gln His Arg Arg Ile His Thr Gly Glu Lys Pro Tyr Lys Cys
 85 90 95
 Glu Glu Cys Gly Lys Ala Phe Arg Gln Ser Ser His Leu Thr Thr His
 100 105 110
 Lys Ile Ile His Ala Ala Ala Ala Arg Gly Met His Leu Glu Gly Arg
 115 120 125

Ile Met
130

<210> 231
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> plasmid sequence

<400> 231
Met Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asn Ser Thr Gln
1 5 10 15
Ala Met Gly Ala Pro Pro Lys Lys Lys Arg Lys Val Gly Ile Arg Ile
20 25 30
Pro Gly Glu Lys Pro Phe Gln Cys Lys Thr Cys Gln Arg Lys Phe Ser
35 40 45
Arg Ser Asp His Leu Lys Thr His Thr Arg Thr His Thr Gly Glu Lys
50 55 60
Pro Tyr Glu Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His
65 70 75 80
Leu Asn Val His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Glu Cys
85 90 95
Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val His
100 105 110
Lys Arg Thr His Ala Ala Ala Ala Arg Gly Met His Leu Glu Gly Arg
115 120 125
Ile Met
130

<210> 232
<211> 152
<212> PRT
<213> *Saccharomyces cerevisiae*

<400> 232
Met Trp Phe Pro Gln Ile Ile Ala Gly Met Ala Ala Gly Gly Ala Ala
1 5 10 15
Ser Ala Met Thr Pro Gly Lys Val Leu Phe Thr Asn Ala Leu Gly Leu
20 25 30
Gly Cys Ser Arg Ser Arg Gly Leu Phe Leu Glu Met Phe Gly Thr Ala
35 40 45
Val Leu Cys Leu Thr Val Leu Met Thr Ala Val Glu Lys Arg Glu Thr
50 55 60
Asn Phe Met Ala Ala Leu Pro Ile Gly Ile Ser Leu Phe Met Ala His
65 70 75 80
Met Ala Leu Thr Gly Tyr Thr Gly Thr Gly Val Asn Pro Ala Arg Ser
85 90 95
Leu Gly Ala Ala Val Ala Ala Arg Tyr Phe Pro His Tyr His Trp Ile
100 105 110
Tyr Trp Ile Ser Pro Leu Leu Gly Ala Phe Leu Ala Trp Ser Val Trp
115 120 125
Gln Leu Leu Gln Ile Leu Asp Tyr Thr Thr Tyr Val Asn Ala Glu Lys
130 135 140
Ala Ala Gly Gln Lys Lys Glu Asp
145 150

<210> 233
 <211> 273
 <212> PRT
 <213> Candida albicans

<400> 233
 Met Val Ala Glu Ser Ser Ser Ile Asp Asn Thr Pro Asn Asp Val Glu
 1 5 10 15
 Ala Gln Arg Pro Val Tyr Glu Pro Lys Tyr Asp Asp Ser Val Asn Val
 20 25 30
 Ser Pro Leu Lys Asn His Met Ile Ala Phe Leu Gly Glu Phe Phe Gly
 35 40 45
 Thr Phe Ile Phe Leu Trp Val Ala Phe Val Ile Ala Gln Ile Ala Asn
 50 55 60
 Gln Asp Pro Thr Ile Pro Asp Lys Gly Ser Asp Pro Met Gln Leu Ile
 65 70 75 80
 Met Ile Ser Phe Gly Phe Gly Phe Gly Val Met Met Gly Val Phe Met
 85 90 95
 Phe Phe Arg Val Ser Gly Gly Asn Leu Asn Pro Ala Val Thr Leu Thr
 100 105 110
 Leu Val Leu Ala Gln Ala Val Pro Pro Ile Arg Gly Leu Phe Met Met
 115 120 125
 Val Ala Gln Met Ile Ala Gly Met Ala Ala Ala Gly Ala Ala Ser Ala
 130 135 140
 Met Thr Pro Gly Pro Ile Ala Phe Thr Asn Gly Leu Gly Gly Gly Ala
 145 150 155 160
 Ser Lys Ala Arg Gly Val Phe Leu Glu Ala Phe Gly Thr Cys Ile Leu
 165 170 175
 Cys Leu Thr Val Leu Met Met Ala Val Glu Lys Ser Arg Ala Thr Phe
 180 185 190
 Met Ala Pro Phe Val Ile Gly Ile Ser Leu Phe Leu Gly His Leu Ile
 195 200 205
 Cys Val Tyr Tyr Thr Gly Ala Gly Leu Asn Pro Ala Arg Ser Phe Gly
 210 215 220
 Pro Cys Val Ala Ala Arg Ser Phe Pro Val Tyr His Trp Ile Tyr Trp
 225 230 235 240
 Val Gly Pro Ile Leu Gly Ser Val Ile Ala Phe Ala Ile Trp Lys Ile
 245 250 255
 Phe Lys Ile Leu Lys Tyr Glu Thr Cys Asn Pro Gly Gln Asp Ser Asp
 260 265 270
 Ala

<210> 234
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> recognition element

<400> 234
 ggggcwrgag gg

<210> 235
 <211> 12

<212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(12)
 <223> n = A,T,C or G

<400> 235
 gctgranggg ah 12

<210> 236
 <211> 31
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 236
 gacaaccggt catcgataag ctaattctca c 31

<210> 237
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

<400> 237
 ttgtccatgg acgctgtttc ctggtgaaa 29

<210> 238
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<400> 238
 daadaaaath ga 12

<210> 239
 <211> 13
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> target sequence

<221> misc_feature
 <222> (1)...(13)
 <223> n = A,T,C or G

<400> 239 gyagrahgan ggk	13
<210> 240 <211> 12 <212> DNA <213> Artificial Sequence	
<220> <223> target sequence	
<400> 240 hgaaathgag gt	12
<210> 241 <211> 12 <212> DNA <213> Artificial Sequence	
<220> <223> target sequence	
<400> 241 gragragggg ra	12
<210> 242 <211> 12 <212> DNA <213> Artificial Sequence	
<220> <223> target sequence	
<221> misc_feature <222> (1)...(12) <223> n = A,T,C or G	
<400> 242 grahganggg tc	12
<210> 243 <211> 12 <212> DNA <213> Artificial Sequence	
<220> <223> target sequence	
<400> 243 gragraggggh ga	12
<210> 244 <211> 12 <212> DNA <213> Artificial Sequence	

<220>
 <223> target sequence

 <400> 244
 gavgaaaath ga 12

 <210> 245
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> target sequence

 <221> misc_feature
 <222> (1)...(12)
 <223> n = A,T,C or G

 <400> 245
 ngggyagraa at 12

 <210> 246
 <211> 13
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> target sequence.

 <221> misc_feature
 <222> (1)...(13)
 <223> n = A,T,C or G

 <400> 246
 gaagrahgan ggk 13

 <210> 247
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> target sequence

 <221> misc_feature
 <222> (1)...(12)
 <223> n = A,T,C or G

 <400> 247
 gradaanggg tc 12

 <210> 248
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> target sequence

<221> misc_feature

<222> (1)...(12)

<223> n = A,T,C or G

<400> 248

ggtnggggtcg ya

12

<210> 249

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> target sequence

<400> 249

daagaaaacg ct

12

<210> 250

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6, 8-10, 12, 14, 18, 21-25

<223> Xaa = any amino acid

<400> 250

Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Ser Asn

1

5

10

15

Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His

20

25

<210> 251

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6,8-10, 12, 14, 18, 21-25

<223> Xaa = any amino acid

<400> 251

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Lys	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 252

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6, 8-10, 12, 14, 18, 21-25

<223> Xaa = any amino acid

<400> 252

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 253

<211> 94

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11, 33, 45, 67, 79

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17, 51, 85

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6,8-10, 12, 14, 18, 21-25, 27-32, 34, 36-40, 42-44, 46, 48, 52, 55-59, 61-66, 68, 70-74, 76-78, 80, 82, 86, 89-93

<223> Xaa = any amino acid

<400> 253

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa	Ser	Asn
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35					40					45			
Ser	Asn	Xaa	Xaa	Lys	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa
	50					55					60				
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa
65					70					75					80
Cys	Xaa	Ser	Asn	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	His	
				85					90						

<210> 254

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6, 8-10,12,14,18, 21-25

<223> Xaa = any amino acid

<400> 254

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Lys
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His						
			20					25							

<210> 255

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11

<223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 17
 <223> Xaa = hydrophobic residue

<221> VARIANT
 <222> 2-6, 8-10, 12, 14, 18, 21-25
 <223> Xaa = any amino acid

<400> 255
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Gln Xaa Thr His
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 256
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 11
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 17
 <223> Xaa = hydrophobic residue

<221> VARIANT
 <222> 2-6, 8-10, 12, 14, 18, 21-25
 <223> Xaa = any amino acid

<400> 256
 Cys Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Val Xaa Ser Thr
 1 5 10 15
 Xaa Xaa Arg His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 257
 <211> 26
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> purified polypeptide

<221> VARIANT
 <222> 11
 <223> Xaa = Phe or Tyr

<221> VARIANT
 <222> 17
 <223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6, 8-10, 12, 14, 18, 21-25

<223> Xaa = any amino acid

<400> 257

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Lys
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	His					
			20					25							

<210> 258

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> purified polypeptide

<221> VARIANT

<222> 11, 33, 45, 67, 79, 101, 113

<223> Xaa = Phe or Tyr

<221> VARIANT

<222> 17, 51, 85, 119

<223> Xaa = hydrophobic residue

<221> VARIANT

<222> 2-6, 8-10, 12, 14, 18, 21-25, 27-32, 34, 36-40, 42-44, 46, 48, 52, 55-59, 61-66, 68, 70-74, 76-78, 80, 82, 86, 89-93, 95-100, 102, 104-108, 110-112, 114, 116, 120, 123-127

<223> Xaa = any amino acid

<400> 258

Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Arg	Xaa	Asp	Lys
1				5					10					15	
Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20					25					30		
Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Gln	Xaa
		35					40					45			
Thr	His	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa	Xaa	Xaa	Xaa
	50				55					60					
Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
65				70					75					80	
Val	Xaa	Ser	Thr	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His	Xaa	Xaa
				85				90					95		
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Cys	Xaa	Xaa	Xaa
				100				105				110			
Xaa	Xaa	Arg	Xaa	Asp	Lys	Xaa	Xaa	Arg	His	Xaa	Xaa	Xaa	Xaa	Xaa	His
			115					120				125			

<210> 259

<211> 630

<212> DNA

<213> Artificial Sequence

<220>

<223> plasmid sequence

<221> CDS

<222> (1)...(627)

<400> 259

atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa	48
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys	
1 5 10 15	
aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg ttc cag	96
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln	
20 25 30	
tgt aaa act tgt cag cga aag ttc tcc cgg tcc gac cac ctg aag acc	144
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr	
35 40 45	
cac acc agg act cat acc ggg gaa aaa ccg tat gtt tgc tca aaa tgt	192
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Val Cys Ser Lys Cys	
50 55 60	
ggg aaa gcc ttc act cag agt tca aat ctg act gta cat caa aaa atc	240
Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu Thr Val His Gln Lys Ile	
65 70 75 80	
cac acc ggg gaa aaa ccg tat gag tgt cac gat tgc gga aag tcc ttt	288
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe	
85 90 95	
agg cag agc acc cac ctc act cgg cac cgg agg atc cac acc ggg gaa	336
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu	
100 105 110	
aaa ccg tat aag tgt cat caa tgt ggg aaa gcc ttt att caa tcc ttt	384
Lys Pro Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe	
115 120 125	
aac ctt cga aga cat gag aga act cac acc ggt gaa aaa gcg gcc gct	432
Asn Leu Arg Arg His Glu Arg Thr His Thr Gly Glu Lys Ala Ala Ala	
130 135 140	
aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg ctc ttt act cgg	480
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg	
145 150 155 160	
gac gag tgg aag aag ctg gat ctg tct cag aga agc ctg tac cgt gag	528
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu	
165 170 175	
gtg atg ctg gag aat tac agc aac ctg gcc tcc atg gca gga ttc ctg	576
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu	
180 185 190	
ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa gga gag gat ccc	624
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro	
195 200 205	

tgg taa
Trp

630

<210> 260
<211> 209
<212> PRT
<213> Artificial Sequence

<220>
<223> plasmid sequence

<400> 260
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
1 5 10 15
Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Phe Gln
20 25 30
Cys Lys Thr Cys Gln Arg Lys Phe Ser Arg Ser Asp His Leu Lys Thr
35 40 45
His Thr Arg Thr His Thr Gly Glu Lys Pro Tyr Val Cys Ser Lys Cys
50 55 60
Gly Lys Ala Phe Thr Gln Ser Ser Asn Leu Thr Val His Gln Lys Ile
65 70 75 80
His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe
85 90 95
Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu
100 105 110
Lys Pro Tyr Lys Cys His Gln Cys Gly Lys Ala Phe Ile Gln Ser Phe
115 120 125
Asn Leu Arg Arg His Glu Arg Thr His Thr Gly Glu Lys Ala Ala Ala
130 135 140
Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val Leu Phe Thr Arg
145 150 155 160
Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser Leu Tyr Arg Glu
165 170 175
Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met Ala Gly Phe Leu
180 185 190
Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln Gly Glu Asp Pro
195 200 205
Trp

<210> 261
<211> 546
<212> DNA
<213> Artificial Sequence

<220>
<223> plasmid sequence

<221> CDS
<222> (1)...(543)

<400> 261
atg gtg tac ccc tac gac gtg ccc gac tac gcc gaa ttg cct cca aaa
Met Val Tyr Pro Tyr Asp Val Pro Asp Tyr Ala Glu Leu Pro Pro Lys
1 5 10 15

48

aag aag aga aag gta ggg atc cga att ccc ggg gaa aaa ccg tat gag Lys Lys Arg Lys Val Gly Ile Arg Ile Pro Gly Glu Lys Pro Tyr Glu 20 25 30	96
tgt gat cac tgt gga aaa tcc ttt agc cag agc tct cat ctg aat gtg Cys Asp His Cys Gly Lys Ser Phe Ser Gln Ser Ser His Leu Asn Val 35 40 45	144
cac aaa aga act cac acc ggg gaa aaa ccg tat aag tgc cct gat tgt His Lys Arg Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Pro Asp Cys 50 55 60	192
ggg aag agt ttt agt cag agt tcc agc ctc att cgc cac cag cgg aca Gly Lys Ser Phe Ser Gln Ser Ser Ser Leu Ile Arg His Gln Arg Thr 65 70 75 80	240
cac acc ggg gaa aaa ccg tat gag tgt cac gat tgc gga aag tcc ttt His Thr Gly Glu Lys Pro Tyr Glu Cys His Asp Cys Gly Lys Ser Phe 85 90 95	288
agg cag agc acc cac ctc act cgg cac cgg agg atc cac acc ggt gaa Arg Gln Ser Thr His Leu Thr Arg His Arg Arg Ile His Thr Gly Glu 100 105 110	336
aaa gcg gcc gct aaa ttc gtg tca gtg aca ttt gaa gat gtg gct gtg Lys Ala Ala Ala Lys Phe Val Ser Val Thr Phe Glu Asp Val Ala Val 115 120 125	384
ctc ttt act cgg gac gag tgg aag aag ctg gat ctg tct cag aga agc Leu Phe Thr Arg Asp Glu Trp Lys Lys Leu Asp Leu Ser Gln Arg Ser 130 135 140	432
ctg tac cgt gag gtg atg ctg gag aat tac agc aac ctg gcc tcc atg Leu Tyr Arg Glu Val Met Leu Glu Asn Tyr Ser Asn Leu Ala Ser Met 145 150 155 160	480
gca gga ttc ctg ttt acc aaa cca aag gtg atc tcc ctg ttg cag caa Ala Gly Phe Leu Phe Thr Lys Pro Lys Val Ile Ser Leu Leu Gln Gln 165 170 175	528
gga gag gat ccc tgg taa Gly Glu Asp Pro Trp 180	546